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No. 265

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18 July 1983

CHINA REPORT AGRICULTURE

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I. GENERAL INFORMATION

MEETING ON SPREAD OF AGRICULTURAL TECHNIQUES

OW191129 Beijing XINHUA in English 1107 GMT 19 Jun 83

[Text] Nanning, 19 Jun (XINHUA)--A national meeting just closed in Nanning city, South China, called for faster spread of applicable agricultural techniques throughout the country.

Although some of the scientific and technical research results in China have attained fairly advanced levels, it was pointed out at the meeting, the results have not yet been widely spread and adopted in the countryside. Scientists and agricultural specialists attending the meeting exchanged results in the fields of energy conservation, rural construction, the utilization of land and water resources and in improving the techniques of crop cultivation, animal husbandry, fishery and forestry.

Sponsored by the state science and technology commission, the meeting pointed out that the peasants' keen desire to raise the level of production facilitates the spread of agricultural science. But China has a vast country side and the scientific institutes have to cooperate closely with agricultural departments to bring science to the hundreds of millions of peasants.

The meeting suggested that from now on, those who have made outstanding achievements in spreading agricultural science and techniques will be awarded just as those who have achieved important research results.

CSO: 4020/95

NATIONAL

POLICY ON TRANSPORTATION OF FARM PRODUCTS FOR SALE DISCUSSED

Beijing NONGCUN GONGZUO TONGXUN [RURAL WORK NEWSLETTER] in Chinese No 1, 1983

[Article by Market Management Section, Industry and Commerce Central Bureau: "Several Questions About Transportation of Agricultural Sideline Products for Sale"]

[Text] 1. Who may transport agricultural sideline products for sale? What agricultural sideline products may be transported for sale? Which ones may not be transported?

Answer: Except for those agricultural sideline products that national regulations do not permit communes and brigades and commune members to sell in markets themselves (such as cotton and rare medicinal materials), once Category I and Category II state centralized procurement quotas and assigned procurement quotas have been fulfilled, rural communes and brigades and individual commune members are permitted to transport and sell these and all other agricultural sideline products. Licensed peddlers in cities and towns may go to rural villages to buy agricultural sideline products within the scope permitted by their licenses. They may use motorized vehicles and boats to transport and sell fresh and live products that rot or spoil easily, goods that are large in volume but low in value, and commodities not purchased by state businesses. Individual commune members may not transport large livestock animals for sale. Plan materials may not be preemptively bought and transported for sale. Bulk buying of goods in great demand from state-owned retail stores for sale at high prices is not permitted. Tricky dealings, domination of markets, and jacking up the price of goods is not permitted. Bulk purchase for sale of fresh vegetables and of products' aquatic products commodity production bases is not permitted.

2. What are regulations on forms of transportation of goods for sale?

Answer: Rural commune members who engage in the transportation of goods for sale may do so as individuals or in partnership.

They may sell at retail or at wholesale. Quite a few city's agricultural sideline product markets have now set up wholesale markets for the convenience of commune members who use motorized vehicles to transport large quantities of permitted agricultural sideline productions into cities and towns. Mostly this amounts to those engaged in the transportation of products gathering together agricultural products that are dispersed among individual rural households and transporting them into cities for batch sales to licensed peddlers who then sell them. This way of doing things saves a great deal of time for those who transport for sale, lowers costs, decreases waste, and makes things easier for them.

3. Are there any restrictions as to the size of the area or the distance that goods may be transported for sale?

Answer: Agricultural sideline products that commune members are permitted to transport for sale are not restricted as to size of area or distance. Flow channels for goods are determined by traditional practice and the current production situation. In a situation of ever increasing modernization of means of transportation, distinctions between long and short hauls have been blurred. In thinking of open commodity flow channels and an economy that transcends cities and countryside, we proceed from the country as a whole and do not limit ourselves to one county, one prefecture, or one province, municipality, or autonomous region. In order to achieve a smooth flow of goods, use materials to their full extent, and even out surpluses and shortages, we must demolish the walls that divide one area from another and the strict delineations; we must abolish artificial limits. Therefore there should be no proper or illegal limits set on the size of the area or the distance that transportation of goods for sale may be carried on.

4. Is it improper to make a lot of money from the transportation of goods for sale and should this be curbed?

Answer: Judgements as to whether individual commune members activities are proper in the transportation of goods for sale should be made on the basis of policy; how much money they earn should not be the criterion. The earnings of those who transport goods for sale differ depending on how much capital they have, whether they are physically strong or weak, and their ability to do business. Generally speaking, the money that is made by transporting goods for sale results from differences in prices between one place and another, and the labor of those who do this work is labor done in the transportation process. Their earnings are earnings from labor, and deserves the government's protection. In addition, one should realize that because of the small

number of their business links, the rapid turnover, and the slight amount of loss and waste, their earnings such be somewhat more. This is fair. One should not suppose that just because a peddler or private person engaged in transportation of goods for sale makes more money that he is engaged in profiteering in violation of the law. Any balancing of income required may be done through economic levers and the levying of industrial and commercial taxes.

5. What is a thieving peddler? Are private peddling activities the same thing as being a thieving peddler?

Answer: "Thieving peddler" is a deprecatory term that was coined in the past when buying for resale was not permitted. At that time, transportation of goods for sale was considered an illegal activity, and anyone who peddled was called a "thieving peddler." Some places even lumped "thieving peddlers" with profiteers and outlawed them or attacked them. This is one reason why such people have been regarded negatively for a long time. Now that transportation of goods for sale is permitted, this term should be discarded. The flow of marketable goods requires their transportation for sale. Frequently some marketable commodities remain that peasants themselves are unable to consume after they have sold goods for state procurement. There are numerous kinds of such goods in not very large quantities, and it would not be worthwhile for the peasants themselves to transport them for sale. For this reason, the peasants like to have someone help them sell them, and gladly compensate them for doing so. This is a situation from which both rural commune members and inhabitants of cities and towns both benefit. Though some violation of policies takes place in the transportation of goods for sale, by strengthening management, some negative things can be avoided. We should support legitimate activities in transporting goods for sale and strictly distinguish such activities from those that violate policies.

6. What approval procedures are required for a commune member to transport goods for sale?

Answer: For commune members engaged in year-round transportation of goods for sale, following agreement by the production brigade, approval by local industrial and commercial administrative departments is necessary. Whether or not approval is given depends on whether or not the goods dealt in are in keeping with policy regulations, and whether or not the commune member has the funds, the manpower, and the business ability required to engage in the transportation of goods for sale. Once it has been determined that the commune member meets requirements, he is issued a business license. In the case of those engaged in seasonal

transportation of goods for sale, usually a temporary permit is issued. Industrial and commercial departments also instruct them to respect market management regulations, to conduct business within the scope of the permission that has been granted, and to pay taxes to tax departments in accordance with regulations.

9432

CSO:4007/142

IMPROVED STATE FARM, LAND RECLAMATION PRODUCTION REPORTED

Beijing NONGCUN GONGZUO TONGXUN [RURAL WORK NEWSLETTER] in Chinese No 1, 1983

[Article by Agriculture Group, State Economic Commission:
"Gladdening Production Situation in State Farm and Land
Reclamation System"]

[Text] The national state farm and land reclamation system has a total of 2,094 farms, 66.13 million mu of cultivated land, 94 million mu of livestock farms, 31.25 million mu of forestland, and 2.24 million mu of aquatic products breeding surfaces. It has farm machinery with a total of 8.68 million horsepower, and it has fixed assets with a value of 10 billion yuan. Since the Third Plenary Session of the 11th Party Central Committee, the broad masses of employees on the state farm and land reclamation front have emancipated their thinking, enlivened the economy and taken grain production firmly in hand while simultaneously actively developing economic diversification for gladdening accomplishments. Gross output value of its industry and agriculture (figured in terms of 1980 constant prices) for 1982 is forecast at 10.76 billion yuan, 27.6 percent more than in 1978 for a 6.3 percent average annual incremental increase. The fine state farm and land reclamation system is manifested primarily in the following:

Steady Rise Year After Year In Outputs of Major Agricultural Sideline Products, Plus Considerable Growth In Output of Cash Crops. Bumper grain crops were harvested in 1979 and 1980, gross output reaching 14 billion and 15.3 billion jin respectively in 1.5 billion and 2.8 billion yuan respective increases over 1978. Despite natural disasters during 1982 that seriously reduced output, national output still totaled 12.7 billion jin (forecast, and the same applies subsequently in this article), exceeding the 1978 level. Cotton output totaled 3.24 million dan; oil-bearing crop output totaled 3.04 million dan; sugar crop output totaled 41.38 million dan, and rubber output totaled 125,000 tons in a 120.3, 78.8, 119.6, and 23.8 percent increase respectively over 1978, and for an annual average incremental increase of 2, 15.6,

21.8, and 5.5 percent respectively. The animal husbandry industry also saw new development. Milk output increased from 530 million jin in 1978 to 750 million jin in 1982, a 41.5 percent increase. Number of fattened hogs removed from inventory rose from 2.41 million head in 1978 to 3.10 million head in 1982, a 28.6 percent increase.

Marked Achievements in Integrated Agricultural, Industrial, and Commercial Operations. As of now 370 integrated agricultural, industrial, and commercial enterprises have been established. There are also more than 6,000 farm operated industrial enterprises and more than 6,000 commercial network outlets. Gross output value of industry reached 4.81 billion yuan in 1982, a 30.7 percent increase over 1978.

Steady Rise in Economic Effectiveness. The system as a whole changed losses into profits in 1979, profits for that year amounting to 390 million yuan. Profits for 1980 amounted to 650 million yuan. Despite particularly severe natural disasters in 1981, profits still amounted to 190 million yuan. Despite disasters in 1982, a profit of 600 million yuan is still forecast. The stigma of long-term losses has been removed.

9432

CSO:4007/142

COUNTRY CREATES 76 RURAL INFORMATION POSTS

OW230958 Beijing XINHUA in English 0854 GMT 23 Jun 83

[Text] Beijing, 23 Jun (XINHUA)--China has set up 76 rural information posts, designed to feed information about new trends and developments in the countryside to the China rural development research center in the capital.

According to a recent national conference on the subject, the China rural development research center has over the past year received more than 6,000 letters, including more than 800 investigative reports and statistical data. The information has helped agricultural departments under the State Council to become acquainted with developments, demands and suggestions of rural cadres and peasants, and has provided the basis for formulating and improving rural policies, according to Du Rensheng, director of the China rural development research center.

The latest information is mostly about good harvests of summer grains and the growth of rural purchasing power. Information posts in Shandong, Henan and Hebei provinces reported insufficient number of granaries for storage, while peasants in Lufeng County in Yunnan Province need more walking tractors for rice paddy operations.

These information posts are distributed in 29 provinces, municipalities and autonomous regions and are able to reflect different levels of development.

The information posts are staffed by personnel of local agricultural departments and funded by the China rural development research center. They often go among peasants and cadres to look into the implementation of rural policies, to listen to local peasants and then file regular reports to the Beijing-based rural development research center. But in the past, rural information mainly filtered up through the county, prefecture and province.

Du Rensheng urged the conference to strengthen rural information network and provide objective reports about both good and bad developments so as to avoid errors owing to subjectivity. He urged the posts to use telephone, telegraph and other rapid means of communication to report the trends and problems in the course of the present agricultural reform. He disclosed that more information posts will be set up.

CSO: 4020/95

JINGJI YANJIU DISCUSSES AGRICULTURE, SIDELINE PRODUCTS PURCHASE

HK030738 Beijing JINGJI YANJIU in Chinese No 5, 20 May 83 pp 65-70

[Article by Lu Baipu [7120 4102 3940] and Yuan Zhenhu [5913 2182 1342]:
"Several Questions on the Purchase of Agricultural and Sideline Products"]

[Text] New Problems in Purchase of Agricultural and Sideline Products

Since the 3d Plenary Session of the 11th CPC Central Committee, agricultural production has enjoyed unprecedented and prosperous development. From 1979 to 1981, the annual growth rate in the gross output value of agriculture was 5.6 percent which greatly exceeded the annual growth rate of 4.3 percent during the years 1950 to 1978. Following the development of agricultural production, the "commodity rate" of agricultural products has already greatly increased. From 1979 to 1981, the gross volume of purchases of agricultural and sideline products averaged a yearly increase of 19.6 percent and the proportion of purchases of agricultural and sideline products out of the gross value of agricultural output has continuously increased, rising from 38.2 percent in 1978 to 45 percent in 1979, 51.7 percent in 1980, and 55.5 percent in 1981. The yearly large-scale increases in the volume of purchases of agricultural and sideline products not only ensures supplies of raw materials to industry and means of consumption to the populace, and eases the longstanding sharp contradiction between agricultural production and the people's needs, but also increases the accumulations of the communes and brigades and the income of the peasants and facilitates the further development of agricultural production.

However, on the side of the purchase of agricultural and sideline products, certain new conditions and new problems have appeared.

First, as a result of the continuous raising for 3 years in succession of the purchase prices of agricultural and sideline products and of certain localities freely increasing, outside of policy limits, the prices of these products and the price subsidies to them, the financial burden of the state incurred in making these purchases has continuously increased and the equilibrium in state finance has been adversely affected. According to statistics, in 1981, the domestic price subsidies paid to nine categories of products including grain, cotton, edible oils, and meat were increased by 300 percent over the 1979 figures.

Second, the base figures for the levy (fixed) purchases of various kinds of agricultural and sideline products have been lowered year after year; the condition of fulfillment of these purchases has been poor, but the price additions for extra purchases have greatly increased. In the [word indistinct] volume of purchases of agricultural and sideline products, the ratio of purchases made [word indistinct] prices was 84.7 percent in 1978, but dropped to 64.4 percent in 1980 and to 58.2 percent in 1981, while the ratio of extra purchases at additional prices was only 7.9 percent in 1978, but went up to 17.9 percent in 1980 and to 20.9 percent in 1981. In the past 3 years, the base figures of grain purchases dropped by 15 billion jin. In the case of cotton, following the large-scale price increases, the ratio of extra purchases at additional prices increased from 30.5 percent in 1979 to 50.2 percent in 1981. In many localities, purchases of nonedible oils and fat, tea leaves and sugar have been made at increased prices or with subsidies.

Third, there has been too fast an increase in the purchase of grain and oils at negotiated prices; the ratio occupied by such purchases has been too large. In recent years, certain localities and units had in mind only their own interests and increased at will the negotiated prices, thus seriously menacing the state plan. In 1978, grain purchases at negotiated prices made up only 2.6 percent of the total purchases, but now it has gone up to 15 percent. Likewise, in 1978, purchases of edible oils at negotiated prices were only 3.6 percent of the total purchases but have exceeded 14 percent at present. Too many purchases made at negotiated prices not only disrupt the fulfillment of the levy purchase tasks and raise the market prices of such agricultural and sideline products as grain and edible oils, but also heavily increase the burden on the state.

Fourth, the scope of bonus sales of purchased agricultural and sideline products has been steadily widened and the standard for bonus sales has steadily increased. In particular, the volume of bonus sales of grain has sharply increased and there are more than 210 varieties of grain available for bonus sales. In 1981, the quantity of bonus sales of grain increased by 130 percent over the 1978 figures. Due to the difference between the purchase price and the "bonus" sales price, in spite of the grain situation in the countryside having turned for the better, the peasants have obtained quite a sizable quantity of grain at parity price from bonus sales, resold them at negotiated prices to the state and pocketed the difference. In this way, the state has suffered a loss by having to pay twice for the grain. Moreover, the criteria for bonus sales differ in different localities. Certain localities have granted bonus sales though not actually called for and have thus artificially aggravated the stringent state in the supply and demand of material resources such as grain and chemical fertilizer.

Therefore, at present, an important task in rural production and circulation work calls for reinforcing the planned guidance of the state in the purchase of agricultural and sideline products, rationally applying various economic levers, correctly handling the relations between the state, the collective,

and the individual and, simultaneously with ensuring the meeting of the basic demands of the state for agricultural and sideline products, respecting the peasants' right of decisionmaking to a certain extent in their operations and doing a good job in the exchange of industrial and agricultural products.

Important Measures in Reinforcing Planned Guidance Consist of Fixing Rational Base Figures and Adopting the Purchase Contract System

Since the early period of the 1950's, in order to have effectual control over agricultural and sideline products, the state has carried out the policy of unified-purchase, levy-purchase and negotiated-purchase concerning the first, second and third categories, respectively, of agricultural and sideline products. Generally speaking, the results of this policy have been satisfactory. However, on account of the policy of exercising too tight a control and its application not having been flexible enough, the peasants, in effect, have little autonomous power in handling the surplus agricultural and sideline products. This has adversely affected the further enlivening of the rural economy.

Since the liberalization of the rural economic policy in 1979, in order to do a good job in the purchase of agricultural and sideline products and placing agricultural production and purchase of agricultural and sideline products on the proper track of the state plan, various localities, in the course of actual practice, have formulated a number of effective measures in this regard. Besides continuing the method of fixing base figures for the unified purchase of agricultural and sideline products of the first category, different methods were adopted conforming to varying conditions for second category agricultural and sideline products, as follows: For those products whose production area is relatively concentrated and the production of which takes up certain cultivated areas and is relatively speaking stabilized, a levy purchase base figure should be fixed. Purchases within the base figure should be made [word indistinct] state listed prices. There should be a certain degree of flexibility in the prices for purchases in excess of the base figure and in such cases the purchases should be made at increased prices or at negotiated prices. As for those products whose production areas are relatively [word indistinct] and the production of which does not take up any cultivated land and is not at all stabilized or which are, in effect, wild grown, the purchase task should be fixed once a year. A fixed portion each should be determined for purchases and for retention, and a combination of parity and negotiated prices should be employed in the purchases (a portion according to listed prices and a portion according to negotiated prices).

Actual practice has showed that the method of fixing the base figure is in accord with the level of development of the rural productive forces at present. It is a manifestation of the planned guidance of the state over agricultural production and also of the peasants' obligation to the state. At the same time, it also protects the legitimate interests of the peasants. Adoption of this method of a fixed base figure can link up well the requirements of the state plan and the decisionmaking power of the peasants, puts at ease the minds of the producer and the purchaser or consumer, and ensures the steady development of agricultural production.

Nevertheless, in implementing the method of a fixed base figure for purchases, at present there are still a number of problems urgently awaiting solution:

First, the new and old production areas are confronted with different fortunes. At present, the base purchase figure in force was fixed according to the purchase results of several previous years and it appears that the base figures of the great proportion of the old production areas are large and the purchase tasks imposed on them are relatively heavy, whereas in the case of the new production areas the opposite is true and, in fact, some of the latter do not have any fixed base figures at all. In more recent years, a great change has taken place in agricultural production. The scale of production-increase in the new production areas has greatly exceeded that in the old production areas, but the purchase base figures have not been readjusted at all. Moreover, the base figures of the new production areas occupy a small proportion of the output volume and the great proportion of their agricultural and sideline products can be sold at quota exceeding prices or at negotiated prices. Their income has thus greatly increased. In this way, a situation of great difference in economic benefits and in financial fortunes exists between the two areas.

Second, in implementing the agricultural production responsibility system, especially when assigning the units full responsibility for production and assigning the households full responsibility for task completion, the purchase base figures of the production teams in the past are carried forward to the contracting units and households. [phrase indistinct] This, in turn, affects the fruition of the purchase task in its entirety. Take grain, for example: In 1979, even after the levy purchase base figure had been reduced by more than 5 billion jin, the actual fulfillment of the base figure was only 90 percent. In 1980, the levy purchase base figure was again reduced by more than 1 billion jin, but the actual fulfillment was only 81 percent. In 1981, the base figure was again reduced, this time by 8 billion jin, and yet the fulfillment was only around 80 percent. Thus, the cumulative reduction in the grain levy purchase figure was more than 30 billion jin. Purchase of edible oils was in a more or less similar state.

Third, in fixing the base figure, frequently, quantity was specified and there was no concrete demand concerning the quality of the products. As a result, the problem of caring only for quantity and neglecting quality requirements arose and second-grade products were frequently delivered while the better-grade products were retained.

In order to maintain policy stability and continuity and better enforce the principle of "taking planned economy as the primary factor and regulation by market mechanism as supplementary," we should, following a summing up of the experiences gained, further perfect the existing formula of fixing the base figure. The basic principle is: the determination of the purchase base figure must be in conformity with the different conditions of the diversified forms of the production responsibility system in force in the countryside. On the one hand, it must be beneficial to strengthening the

state's planned guidance over agricultural and sideline products; on the other hand, it must respect the autonomous rights of the communes and brigades, provide a definite leeway to the peasants and further enliven the rural economy. Starting from this basic principle, certain problems must be clarified when determining the purchase base figures.

First, the base must be in harmony with the state plan and must be solemn in character. Actually, this so-called base refers to a specified quantity of necessary and major agricultural and sideline products which the state must have on hand within a stated period and which the state ordains the peasants to deliver. As soon as the purchase base figure for agricultural and sideline products has been determined, it must assume a mandatory character and the governments and departments at various levels as well as the communes, brigades, units, and households at the grassroots level must ensure its fulfillment. In order to ensure the fulfillment of the state's overall task, units below the county level may, on the basis of the levy purchase base figure designated by the province or the district, add on a 3 to 5 percent flexible margin and also are subject to the provision that surplus delivery may be used to offset past or future insufficiency with the base still remaining unaltered. However, this requires careful handling and checking in order to guard against additional charges imposed level after [word indistinct] and thus increasing the peasants' burden.

Second, determination of the base must conform to rationality. It must take into account the duration of the production period and the potential for agricultural production development. Possible changes in the condition of market supply and demand must also be anticipated. For the purpose of the planned regulation of production and circulation, the purchase of certain agricultural and sideline products may be subjected for a certain period to a method of either a progressive increase or a progressive decrease. For example, in the case of so-called products in short supply, the method of a progressively increasing base figure may be adopted; that is, take a certain year as the base period following which the base figure will be annually increased at a fixed rate. As for the goods in ample supply, the method of an annually decreasing base figure may be adopted according to which a certain year is taken as the base period following which the base figure will be annually reduced according to a fixed rate. In this way, the disproportionate production ratio will be readjusted.

Third, concerning the matter of unequal fortunes between the new and old production areas, the new areas, starting from the second year after they have reaped a harvest, should be subjected to requisite purchases of a rational character which are determined according to the level currently applicable to communes and brigades in the locality which engage in planting work. As for those communes and brigades in relatively poor or difficult circumstances, which did not have any base figure fixed, or which had only relatively small base figures fixed, it is of course necessary to provide them with a grace period so that they may have time, with our help and support, to change their countenance. However, as soon as they see better days and become more affluent, the base figures should be adequately readjusted.

Fourth, the contract system should be used to further supplement this measure of fixing a base figure for the purchase of agricultural and sideline products. In addition, it should be linked together with the agricultural production responsibility system and the cadres' post responsibility system, so that all three systems should be enforced jointly. This will make possible the further linking together of production and marketing. It will truly mean the development of agricultural production in strict conformity with the demand of the state and with market needs, and the relations between agriculture and commerce will be tightened. At the same time, the purchase contract for agricultural and sideline products should specify not only the peasants' obligation to the state but also the purchasing department's responsibility to the peasants. A contract once signed must be implicitly implemented.

Bringing Economic Levers Into Full Play and Further Enlivening the Purchase Work of Agricultural and Sideline Products

In the purchase of agricultural and sideline products, for the sake of strengthening the state's planned guidance, implementation of the fixed base figure method and promoting the purchase contract system are both very necessary. But at the same time we must give special note to bringing into full play the role of various economic levers, especially that of the price lever.

In the socialist stage, we still need to greatly promote commodity production and commodity exchange. At present, although the self-sufficiency portion of our country's agricultural and sideline products occupies a rather large ratio, yet the commodity rate of agricultural and sideline products has reached over 35 percent and is continuously rising. Hence, it is becoming increasingly important how to consciously utilize the price lever and bring its role of regulating agricultural production into full play. Nevertheless, at present, in the purchase of agricultural and sideline products the price lever has not played its role well. This is principally shown in the following two directions:

First, so far as agricultural and sideline products are concerned, the practice of only allowing their prices to rise and not to fall renders null and void the role of the price lever to regulate production. Since the 3d Plenary Session of the 11th CPC Central Committee, the purchase prices of agricultural and sideline products have been raised on a relatively large scale. This is entirely correct. However, because of the failure to make an adequate estimate of the objective production condition and because the steps taken in certain price readjustments were too fast and too big, simultaneously with promoting agricultural production development in general, development of certain products was allowed to forge ahead more or less blindly. Moreover, under such conditions, we were unable to make use of the flexibility of the price lever to make suitable adjustments and to retain an equilibrium in agricultural production, as a result of which we have even

aggravated the situation of certain products being developed more or less blindly. This method of allowing prices only to go up and not to come down not only could not play any useful role in price readjustment but also impeded the working of the state plan.

The establishment of a rational planting ratio between grain crops and economic crops is affected. Because the comparative prices of certain products are not too rational, a great disparity exists in the money yield of the products. It is known that receipts from planting 1 mu of peanuts are equivalent to receipts from planting 1.5 mu of grain, and receipts from the planting of 1 mu of tobacco or cotton are equivalent to planting 3.5 mu of grain. The peasants do not want to plant too much grain; as a result, the stability of grain production is adversely affected. At the same time, the localities lose money in grain operations and the more grain they export the heavier their financial burden. Seen from the standpoint of partial interests, the localities would rather develop more economic crops. This has brought about the abnormal situation of a sharp reduction in the acreage planted to grain. In 1978, the total area planted to grain in the country was 1.81 billion mu. It dropped to 1.72 billion mu in 1981. At the same time, the plantation area for economic crops rose from 220 million mu to 260 million mu. If such a state of affairs is allowed to develop, inevitably the rational arrangements for agricultural production will be adversely affected and the planned and proportionate development of the national economy will meet with new difficulties.

This being the case, how should we bring into full play the role of the price lever in the purchase of agricultural and sideline products?

First, concerning the present purchase prices of agricultural and sideline products we should adopt a policy of "basically stabilizing and separately readjusting." In the past few years, there has been a rather large-scale increase in the purchase prices of agricultural and sideline products and in certain respects the steps taken have been over-extended. From now on, in order to enhance their income, the peasants should principally rely on production development, lower the cost of production, raise the labor productivity rate, and not depend on raising the purchase prices or on lowering the purchase base figure or on increasing the financial burden of the state. It should be noted that since the founding of the PRC, the price scissors between industrial and agricultural products in our country have been gradually reduced. The composite comparative price index of industrial and agricultural commodities (taking the general retail sales price index of industrial products in the rural villages as 100) was 100 in 1950, 198 in 1978 and 263 in 1981. In other words, using the same quantity of agricultural products in 1981, we can exchange 160 percent more industrial products than in 1950. Naturally, the scissors differential between industrial and agricultural products at the moment has not been entirely eliminated and it is also not realistic to try to have it completely eliminated in the near

future. What we can do is to gradually solve the problem following the steady improvement of the national economy. From now on, formulation of the price policy for agricultural products must taken into account the interests of the state, the collective, and the individual. We must, on the one hand, gradually reduce the financial burden of the state and, on the other hand, enable the peasants to enhance their income each year following production development. At the same time, the scale of price additions and of negotiated prices must be kept reasonable. There must be rigid control over the proportion of purchases made at extra prices or negotiated prices out of the total volume of purchases of agricultural and sideline products. We must arouse the production enthusiasm of the peasants and, at the same time, look after the interests of the industrial and commercial enterprises and the consumers.

Second, there should be a certain degree of flexibility in the purchase prices of agricultural and sideline products. We must separately take into account such factors as the production volume of agricultural and sideline products, their importance to the national economy and the people's livelihood and the condition of their supply and demand. Price movements should be permitted only within a restricted sphere. For example, in the case of grain and cotton, purchase of the portion within the purchase base figure may be made at listed prices while purchase of the portion outside the purchase base figure, at additional prices or negotiated prices. In the case of hogs and eggs, one price should apply to both portions inside and outside the purchase base figure and this price should be the listed price. Certain products are urgently needed by the people, but because the prices tend to be too high, consumption of them has been affected. For example, in the case of rapeseed, its production has developed rather rapidly over the past few years and there has been a rather large stockpiling of this product. In such a case, we should appropriately lower the purchase price and readjust the sales price in order to maintain an equilibrium between production and consumption. In the case of certain other products, the demand for them is rather limited. We should appropriately control their production. Take tobacco leaf, ramie, and others for example: Purchases of them, if made within the purchase base figures, should be at listed prices. As for the portions outside the purchase base figure, they should be handled by the production teams and the commune members. If they wish to sell the products to the state, purchases may be made either at, or below, the party price as a measure to restrict the blind development of these kinds of products. In the case of certain other products, they may be subjected to such a measure as to restrict the quantity available for purchases at additional prices; that is, on the portion originally meant for additional prices purchases must still be made at listed prices. At the same time, we should earnestly implement the principle of fixing the prices according to the quality of the products; such as, good quality products bring good prices and poor quality products bring poor prices. Grades of products should not be freely raised as a measure to command higher prices and should not be freely lowered to pave the way for lower prices. In no case should outside products, or another kind of product, be deployed to meet the purchase base tasks. Some products are of a highly seasonal nature. In such cases, seasonal differential prices should apply.

Third, the comparative prices of the various kinds of agricultural and sideline products should be rationally arranged. In order to promote the proportionate development of agricultural production, the comparative prices of different kinds of products should naturally be rational ones. According to the actual conditions of our country, grain price should be taken as the center for arranging and fixing the prices of the various kinds of agricultural and sideline products. In this way, we are upholding the policy of encouraging and promoting grain production. At present, our country's fundamental policy in regard to agricultural production is never to relax on grain production but actively to develop diversified operations. We must firmly and resolutely carry out this policy. At present, in our country equilibrium has not yet been reached between the production of grain and the requirement for grain. Each year, the country has to import several tens of billion jin of grain. In order to solve this problem, aside of giving priority to ensuring a steady increase in grain production before making any arrangements for planting the economic crops and never again reducing the acreage planted to grain, we should also adequately readjust, in a planned manner, the prices of grain and the prices of economic crops. Income yield from the planting of economic crops may slightly exceed that from the plantation of grain crops but the difference should never be too great. We must adopt a price policy to actively guide the peasants to devote, wherever possible, more farmland to the planting of grain crops, in this way enabling a rapid growth in grain production. We must also take a lesson from past years' experience, which is that in arranging for the comparative prices of the agricultural and sideline products we must specially avoid the repetitious readjusting of prices and the creation of one price imbalance after another.

Fourth, we should adequately readjust the bonus sales method. In the past, on certain agricultural and sideline products, a certain bonus sales system was in force. It had a designated sphere of operation and certain fixed standards. Practice has showed that such a measure was necessary. However, the method cannot remain entirely unchanged. Following development in agricultural production and changes in production and demand conditions, necessary readjustments must be made. At present, the scope of the bonus sales of agricultural and sideline products has grown increasingly larger and the standards set have become much higher. The situation is such that it can hardly be further expanded. Accordingly, it is high time to follow the principle of having the scope gradually reduced and the standards lowered and to overhaul the entire system altogether. In particular, the scope of bonus sales of grain should be reduced and the standards lowered. In those cases in which it is not necessary to continue to use grain as a bonus, then it should not be so used, and nor should it be used for exchange purposes. As for products with no direct relation to grain, grain should not be used for award or for exchange purchases. Concerning industrial products urgently needed by the populace, including the means of production and daily consumption goods, utmost efforts should be made to ensure their adequate supply.

Changing the Rural Circulation System in Conformity With the New Situation in the Countryside

In recent years, enormous changes have taken place in the rural economy. The parties that the commercial departments have to deal with in their business dealings are no longer just the 5.5 million production teams of the past years, but rather the 170 million individual peasant households. This necessarily requires a basic reform of the commercial structure in the countryside.

At present, rural commerce can hardly cope with the demands arising from the new development of the rural commodity economy. No sooner had diversified operations developed in the countryside, then there arose various difficulties such as those confronting the sale of grain, or the sale of cotton, or the sale of hogs. Due to the purchase tasks having become increasingly heavy, even the utmost efforts made by the supply and marketing departments of the rural villages can hardly cope with the demands of the new situation in agricultural production development. Such factors as an inadequate purchasing network, an insufficient number of purchasing points, their irrational geographical distribution and the lack of the necessary storage and warehouse facilities, the purchase of certain agricultural and sideline products can hardly be made in strict accordance with the state plan. It even happens that unnecessary losses and waste often have been incurred. In addition, according to statistics, as a result of the rapid increase in the purchase volume of agricultural and sideline products and the rise in their purchase prices, the inflow of currency into the rural villages has vastly increased and it is estimated that of the volume of currency in circulation, 60 to 70 percent are in the hands of the peasants. The peasants want to improve their standard of living. They want to further promote and develop production. They require large quantities of consumer goods for daily use as well as large quantities of construction materials. They need more chemical fertilizer, farm medicines, plastic film, small farm tools, and other means of production. It appears that at the moment we are still unable to fill these daily increasing needs of the peasants. Hence, one of the key problems now in further promoting the development of agricultural production concerns improvement of rural commerce, improvement and smoothing out of the circulation lanes of commodities between the cities and the countryside and, above all, bringing into full play the useful role of rural supply and marketing cooperatives as the major circulation lane in the economic interflow between the cities and the countryside. For this reason, we should further strengthen the work of the supply and marketing cooperatives, allow them to resume their commercial character and to display their special features of being large in number, wide in operation scope and able to reach far and wide. We should expand their business scope so that, on the one hand, they can shoulder the purchasing tasks of the state, and, on the other hand, market the peasants' products, provide the peasants with the means of production and of livelihood, and generally render services to the peasants in production, technology, and even daily livelihood.

At the present stage, the exchange of industrial goods for agricultural products is the only acceptable formula on the part of the peasants. Therefore, in the purchase of agricultural and sideline products, we cannot place sole emphasis on "taking" from the peasants. Rather, we should give thought to what we can "give" to the peasants. Indeed, we should, as soon as possible, break open the circulation system of making of demarcation between the cities and the countryside and ship more industrial goods to the countryside to enrich the rural markets.

At present, we have entered a period of great development of socialist commodity production in the cities and countryside. Following the development of agricultural production and the growth of the internal division of work inside the agricultural sector, commodity circulation will steadily increase in scope. The existence of a rational circulation lane which permits the smooth flow of goods will help in the further development of agriculture. On the other hand, any trend which overlooks the important role of such a circulation lane may impede and even stifle the development of agricultural production. Hence, in simultaneously restructuring the state-operated commercial structure and developing collective commerce, and in order to better solve the problem of peasants in remote or out-of-the-way areas having difficulties in disposing of their wares, we should, in policy, permit the existence of individual peddlers. It should be recognized that to collect agricultural and sideline products distributed in various localities which neither state-operated commerce nor collective commerce can reach, and to deliver them to cities and towns for marketing is in reality a further step in production. It also constitutes a supplement to the existing circulation channels, and should not be misinterpreted as mere speculative or profiteering ventures. If we can, in simultaneously developing state-run commerce and collective commerce, swiftly make use of the individual circulation lane, then rural economy will be further enlivened and agricultural production will achieve an even greater development.

CSO: 4007/188

BRIEFS

INSECTICIDE INDUSTRY--Nanjing, 21 Jun (XINHUA)--According to a report meeting on farm insecticide projects' construction sponsored by the Ministry of Chemical Industry in Changzhou, Jiangsu, on 21 June, China will build 20 farm insecticide plants during the last 3 years of the Sixth Five-Year Plan. When these 20 plants start production, they can produce over 20,000 dun of farm insecticide for over 200 million mu of farmland. [Summary] [OW280449 Beijing XINHUA Domestic Service in Chinese 1514 GMT 21 Jun 83]

SAVINGS DEPOSITS' INCREASE--Beijing, 23 Jun (XINHUA)--China's bank savings deposits of urban and rural people increased 7.77 billion yuan in the first 5 months this year, 18.6 percent over the corresponding 1982 period, according to today's ECONOMIC DAILY. The urban and rural bank deposits totalled 75.31 billion yuan by the end of May. Fixed deposits in urban areas accounted for 81.2 percent while those in rural areas, 70.8 percent, slightly higher than 1982. In recent years, the banks have helped people arrange their consumption as well as deposits. They increased varieties of deposits for the convenience of people who want to buy high-grade or durable consumer goods, build or repair houses. If depositors have not enough money for the time being, banks provide loans for them. Three thousand four hundred savings banks and [word indistinct] have been added in the urban areas in the past 2 years and brought the total figure to 14,200 by the end of 1982. [Text] [Beijing XINHUA in English 1233 GMT 23 Jun 83 OW]

CSO: 4020/95

BRIEFS

AGRICULTURAL PRODUCTION--Beijing, 18 Jun (XINHUA)--Anhui, one of the first provinces to introduce a job responsibility system in China's rural areas, is aiming at still higher agricultural output. While discussing Zhao Ziyang's government work report at the National People's Congress, Vice-Governor Meng Fulin said the province will take a series of steps to improve conditions of rural production. Meng Fulin said per-hectare yield, farming efficiency, the ability to resist natural disasters, the utility rate of farm products and the level of farming technique are still low in the province. To remedy the situation, he listed the following measures: 1) As the soil in Anhui is seriously short of phosphorus, a number of phosphate fertilizer plants will be built in 5 years. Their output will be enough to meet the need. 2) With the rapid expansion of animal husbandry, a number of key factories will be built to increase the supply of mixed animal feeds. Each county is also to build a fodder processing plant of its own with an annual capacity of 3,000 tons. 3) More hydro-electric power stations will be built to produce enough electricity for rural production and household use, in some selected counties at first. 4) While encouraging agro-technicians to improve their work, the province plans to help all educated youth in the rural areas learn agricultural sciences in the next few years. Agro-technical courses will be set up in all rural schools. [Excerpts] [Beijing XINHUA in English 0830 GMT 18 Jun 83 OW]

CSO: 4020/95

BEIJING

BRIEFS

AGRO-SCIENTIFIC RESEARCH POPULARIZATION--Beijing, 25 Jun (XINHUA)--A hybrid rice variety able to grow in both paddies and dry land is one of the 15 agro-scientific research results designated for nationwide popularization this year. "Le You-570," a round-grained nonglutinous rice variety developed by scientists in Liaoning Province, yields an average of more than 7.5 tons per hectare, about 0.75 tons more than conventional varieties, a spokesman for the Ministry of Agriculture, Animal Husbandry and Fishery announced today. The ministry plans to expand the area under "You Li-57" by 8000,000 [as received] hectares across China, the spokesman said. It has already been grown over large areas in Liaoning, Henan and Shandong provinces and in farming areas of the Beijing Municipality. The other items to be popularized include new wheat cultivation methods for areas on the middle and lower reaches of the Yangtze River, and a high yielding peanut variety. The ministry has decided to allocate a special fund of 245,000 yuan to popularize use of the 15 research results, the spokesman said. Responsibility contracts have been signed between the ministry and units in charge of the popularization and demonstration of the results, the spokesman said. [Text] [Beijing XINHUA in English 1441 GMT 25 Jun 83]

CSO: 4020/95

RECORD CANE SUGAR OUTPUT REPORTED

Beijing JINGJI RIBAO in Chinese 24 May 83 p 2

[Article: "Another New Record This Year in Guangdong's Cane Sugar Production"]

[Text] Following two consecutive years of bumper harvests, Guangdong Province's cane sugar production set a new record this year. Gross output is expected to be more than 1.48 million tons, 15 percent higher than in 1982. As of the end of April, the state had purchased more than 1.24 million tons of sugar throughout the province. This was 130,000 tons much more than the amount purchased all last year. Purchases during this production year are expected to reach 1.32 million tons. This plus more than 800,000 tons sent out of the province will mean an all-time high.

Guangdong Province is one of the country's major sugar producing areas, producing about 40 percent of the country's total sugar output. It holds first place in supplying sugar to other parts of the country. In order to make further use of this local strength, with support from the central government and all jurisdictions, the Guangdong Provincial Government has adopted a series of favorable measures in recent years to increase benefits to cane growing peasants. At the same time, it has promoted contract responsibility systems linked to output in cane growing areas, which have stirred peasant enthusiasm for production. During the past 3 years, a group of sugar extraction plants have been newly built or expanded to increase sugar extraction capabilities from 80,000-odd tons to more than 120,000 tons per day in satisfaction of needs for development of production. During the past 3 years, the province's cane sugar output has increased by an average 20 percent per year; state procurement has increased by 22 percent; and shipments outside the province have increased by more than 30 percent. The percentage of marketable product has steadily risen. This has brought about a flourishing of city and country markets, and has made new contributions in satisfying the needs of the people.

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4007/163

REASONS FOR INCONSISTENT LATE RICE CROP YIELDS ANALYZED

Guangzhou NANFANG RIBAO in Chinese 25 May 83 p 1

[Article by Li Shanfa [2621 0810 4099], Guangdong Provincial Department of Agriculture: "Accentuate Advantages, Avoid Disadvantages, and Fight Natural Calamities to Harvest a Bumper Crop. Several Ideas on How To Increase the Province's Late Rice Crop Yields"]

[Text] The late rice crop is the one that contributes most to the year's grain production; nevertheless, since founding of the People's Republic, late rice production has been extremely inconsistent in Guangdong Province. Statistics show that in the 33 years between 1950 and 1982, yields increased in 17 years, decreased in 11 years, and were average in 5 years. The main reason for such great ups and downs in late rice production is the frequency during the late rice crop production period of typhoons, torrential rains, diseases, insect pests, and such natural calamities, plus the growing of too many late ripening varieties that suffer cold damage as a result of their long growing season, which has occasioned varying degrees of losses in numerous years.

In order to change the great ups and downs in the province's late rice production, for some time to come, the thrust in late rice production must be to seek increase while holding steady, to accentuate advantages and avoid disadvantages, and to fight natural calamities to harvest bumper crops.

So just what factors cause the inconsistency in late rice production? Mostly it is the result of inconsistent production condition, inconsistent changes in the weather, and inconsistent key technical measures. Inconsistency in production conditions means mostly the growing of late ripening local varieties over too large an area, and great changes in the composition of fertilizer. Inconsistent weather means mostly the great effects of cold air. Inconsistent key technical measures means mostly the gradual postponement of the seedling transplanting season, and damage to soil resources. Two of these three inconsistencies are the

work of man; one is the work of nature. If too much emphasis is placed on the natural element, the human element may be ignored, and it will be difficult to get production out of a passive situation.

The fight against natural calamities to harvest a bumper crop is a strategic measure for increasing late rice crop output. Fighting calamities consists of both combat and avoidance. Avoidance consists largely of the use of fairly early ripening, high yield varieties. I believe that proper expansion of the growing of hybrid rice is an important way in which to avoid the cold dew winds during the late stages of late rice crop growth to obtain high yields. Since the late rice varieties currently being promoted such as Baoxuan No 2 and Erbaiai are late ripening varieties, they do not head until after 10 October, do not tolerate low temperatures, and their yields are seriously impaired if they encounter cold dew winds. By contrast, hybrid rice exhibits characteristics of early ripening, obvious heteroses, and consistently high yields. Under like conditions, it produces yields of 100 jin per mu more than conventional varieties. Development of hybrid rice can solve the four great contradictions in late rice production namely: 1. very great inconsistency in late rice production, and inability to find a superior variety that produces consistently high yields. Yields from the existing Shanyou and Weiyou systems, however, are generally consistently between 700 and 800 jin per mu, sometimes going as high as more than 1,000 jin. 2. Great danger to the late crop from low temperatures and cold dew winds; and lack of high yield varieties that are able to stand up to low temperatures and cold damage. By contrast, the Shanyou and Weiyou system hybrids are sown in early July, transplanted at the end of July, and have fully headed before the last 10 days of September, enabling them to avoid cold damage. 3. Lack of a strongly resistant high yield variety that is able to withstand the high temperatures, high humidity, and numerous plant diseases and insect pests of summer and fall. Shanyou No 6, and Weiyou No 6, however, are noted for their resistance to sheath and culm blight and bacterial blight. 4. Most high yield varieties produce rice of fairly poor quality, while Weiyou No 6 and Shanyou No 6, which are currently being promoted, not only produce high yields, but also produce rice of rather good quality. Therefore, promotion of hybrid is an important measure for solving current contradictions in the province's grain production and achieving consistently high yields from the late rice crop.

A combination of increased fertilization, accumulation, nurture, and planting is another way in which to increase late rice yields. Present amounts of organic fertilizer are a long way from being able to satisfy needs. Production of organic fertili-

zer must be given great attention; mud fertilizer must be accumulated and stored all year round; pulse crops must be grown; and stalks and stems must be returned to the fields. Soil surveys taken everywhere in the province show a serious lack of potash in ricefields. In the growing of hybrid rice, in particular, increased fertilization with potash produces marked increases in yields. Experiments have shown an increase in paddy yield by about 5 jin for each jin of potash applied. Guangdong Province is fairly lacking in potash resources. Appropriate increase in imports of potash fertilizer would be very helpful in increasing rice yields.

Improvement in farming techniques is yet another effective measure for increasing late rice yields. Appropriate readjustment of the amount of seeds sown should be done first of all, seeds being sown sparsely for sturdy seedlings and for improved seedling quality. The amount sown should be reduced from the former 200 to 300 jin between 50 and 60 jin per mu of paddy field. This is a powerful measure for the growing of sturdy seedlings to harvest high yields. At the same time fewer seedlings should be transplanted. Formerly, with conventional varieties, each clump had at least seven or eight seedlings and sometimes more than 10. If rice seedlings have been propagated properly, three or four seedlings are all that is needed. More than half the former 20 jin per mu of seeds could be saved, and this action alone could save the province 360 million jin of seeds per crop or 720 million jin of seeds per year while still increasing yields. In addition, readjustment and restructuring of plant colonies is necessary. As varieties have changed and the level of water and fertilizer management has steadily improved, some places have ill-advisedly increased the distance between rows. This should be watched. As far as hybrid rice is concerned, this means mostly an insufficient number of heads. Generally only one plant per clump is transplanted so the effective number of heads will be only 140,000 to 150,000 per mu. Were each clump to have two plants, the effective number of heads would be increased to between 180,000 to 200,000 per mu, so the potential for increased yields is still very great.

9432

CSO:4007/163

MORE GROWING OF LATE RICE TO COMPENSATE FOR EARLY CROP SHORTFALL

Guangzhou NANFANG RIBAO in Chinese 25 May 83 p 1

[Article: "More Growing of Hybrid Rice as Late Crop"]

[Text] Vigorous promotion of hybrid rice on a national scale will be a major measure for some years to come in achieving tremendous increases in grain yields. The growing of various kinds of hybrid rice as a late crop this year is even more necessary. This is because during this year's early crop Guangdong Province sustained a long period of low temperatures, and overcast rainy weather, which delayed transplanting time. This resulted in corresponding delay in harvest time, which will inevitably affect the timely transplanting of the late rice crop. Meteorological forecasts call for the possible early arrival this year of "cold dew winds." Under these circumstances, the key to harvesting a bumper late crop lies in planting more hybrid rice in order to avoid the "cold dew winds." Nowadays numerous places realize the benefits to be gained from hybrid rice from their own experience with increased yields, and they are actively promoting it. Where a small early rice crop was planted, preparations are underway to plant a large late crop. Shantou Prefecture, which formerly carried the "high yield burden" and did not dare go all out in expanding production, has now demolished conventions and plans to grow more than 1.1 million mu of hybrid rice as a late crop this year, which is a very gladdening change. However, some places have yet to take a sufficiently firm grip on this work and do a sufficiently solid job. This is extremely bad for assuring increased late crop yields.

Where conditions permit, whether or not more hybrid rice can be grown is a major matter that bears on whether this year's plans for increased grain production can be fulfilled. The period of grain in ear [around 6 June] has already arrived, and the season for sowing the late rice crop is close at hand. All jurisdictions must take a very, very firm grip on this task of promoting the growing of hybrid rice. Not only must they assign the area to be planted, but they must also make sure that each of the tasks of bringing in seeds, soaking them, and growing sturdy seedlings is done one by one. This is the only way that late crop hybrid growing plans can be smoothly fulfilled.

PROGRESS REPORT PROVIDED ON INTEGRATED ENTERPRISES

Guangzhou NANFANG RIBAO in Chinese 25 May 83 p 1

[Article: "Rapid Development of Commodity Economy During 3 Years of Trial Operation of a Group of Integrated Agricultural, Industrial, and Commercial Enterprises in Province's State Farm and Land Reclamation System"]

[Text] Sixteen farms in Guangdong Province's state farm and land reclamation system including Huguang and Yantang farms have tried out integrated agricultural, industrial, and commercial enterprises for the past 3 years. The gross output value of industry and agriculture, enterprise profits, and the labor productivity rate of all personnel in these units has increased very greatly, and remarkable economic effectiveness has been achieved.

These 16 integrated agricultural, industrial, and commercial enterprises are increasingly influencing and promoting more than 100 farms in the reclamation area to develop in the direction of all-around agricultural, industrial, and commercial operations. In 1982, industrial and agricultural gross output value for the province's reclamation area was 19.23 percent higher than in 1981. Economic development in the Zhanjiang reclamation area was more rapid than elsewhere. Its gross output value from industry and agriculture was 24.1 percent higher in 1982 than in the previous year, and 72.1 percent higher than in 1978 before the trial operation of integrated agricultural, industrial, and commercial enterprises. Last year profits grew by 43.3 percent, and profits turned over to the state increased 19 percent. In 3 years of trial operation of integrated agricultural, industrial and commercial enterprises, Yantang Farm, a part of the state farm and land reclamation system in suburban Guangzhou, more than doubled the gross output value of its industry and agriculture; net profits tripled; labor production of all personnel increased 90 percent.

Guangdong's reclamation areas have abundant soil and water resources, with more than 16 million mu of land, and between

60,000 and 70,000 mu of water surfaces. Following the Third Plenary Session of the 11th Party Central Committee, the reclamation area devoted attention to the elimination of "leftist" ideological influences, and gradually freed itself from the backward situation of having an undiversified economy practicing a single kind of operation and self sufficiency. In 1980, all jurisdictions began trial operation of a group of integrated agricultural, industrial, and commercial enterprises to bring about a change in the former situation in state farm and land reclamation of undiversified agriculture and production of nothing but raw materials. Qianjin Farm in the Zhanjiang reclamation area stressed the growing of sugarcane. Formerly it had lost money for more than 20 years from undiversified growing of cane, but after operating integrated agricultural, industrial, and commercial enterprises, with farms and sugar refineries working together in economic partnership, profits could be returned to the cane growers who were then able to produce candies and paper in the development of farm operated industries, and every year since 1980 they showed a profit. In 1982, profits amounted to more than 4 million yuan, making it the enterprise that had made the most money in the entire reclamation area. Staff and worker income rose; standards of living improved; and some households made 10,000 yuan.

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CSO:4007/163

GUANGDONG

BRIEFS

RELIEF FUNDS TO HONG KONG--Guangzhou, 24 Jun (XINHUA)--Due to torrential rain over recent days in Hong Kong, some places were hit by floods and some houses collapsed. Yesterday, the Guangdong Provincial Red Cross Society sent a telegram to the Hong Kong Red Cross Society extending sympathy and solicitude for the stricken citizens. It also donated 50,000 yuan as relief funds for the victims. [Text] [HK241550 Beijing XINHUA Domestic Service in Chinese 1405 GMT 24 Jun 83]

CANE SUGAR PRODUCTION--The province has decided to hand over to the state some 850,000 jin of cane sugar this sugarcane-pressing season, an increase of 34.9 percent over the last highest season. By 10 June, a total of 780,000 tons of cane sugar had been transported to other areas and submitted to the state. The province planted sugarcane on 380,000 mu of land in 1982, and produced a total of 1.45 million tons of cane sugar in the 1982/1983 sugarcane-pressing season, an all-time record high. [Summary] [HK241155 Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 20 Jun 83]

CSO: 4007/189

BRIEFS

FAMILY PLANNING ACHIEVEMENTS NOTED--Since the beginning of this year, all places in our province have extensively strengthened leadership over family planning work and the rate of sterilization has remarkably increased. According to statistics, some 720,000 sterilization operations of various kinds were carried out from January to May. [words indistinct] Accounted for 49.43 percent of sterilization operations of various kinds, was some 310,000 cases more than in the same period last year, and was 3.53 percent more than the total sum from 1980 to 1982. [Text] [HK180303 Guiyang Guizhou Provincial Service in Mandarin 2300 GMT 16 Jun 83]

RAPESEED PROCUREMENT CIRCULAR ISSUED--The Guizhou Provincial People's Government issued an urgent circular on doing a good job in rapeseed procurement work on 22 June. The circular pointed out that though this year's rapeseed output is higher than last year's, a large percentage is of inferior quality according to the standard prescribed by the state. In some places, people even gain profits from [word indistinct] rapeseed which state commercial units refuse to purchase. The circular requires: "1) Governments at all levels and all prefectural administrations should urge grain departments to correctly implement the price policy prescribed by the provincial authorities in rapeseed procurement work and take measures to purchase as much rapeseed as possible. 2) It is necessary to ask peasants to do a good job in drying and threshing rapeseed reaped from fields so as to improve the quality of their products. The purchase of rapeseed below the quality standard should not be over 5 percent. 3) Prices for rapeseed of different quality should be appropriately readjusted." [Summary] [HK270803 Quiyang Quizhou Provincial Service in Mandarin 2300 GMT 25 Jun 83]

CSO: 4007/189

BRIEFS

LAND TRANSFORMATION PLAN--Shijiazhuang, 8 Jun (XINHUA)--Hebei Province has launched what is regarded as China's largest saline-alkali land transforming program, with the assistance of international funds. The 5-year program, starting this year, covers 35,000 hectares of waste land along a section of the Haihe, half of which is low-yielding, saline-alkali land. It involves building irrigation projects, laying power transmission lines, afforestation and mechanized farming--comprehensive management as described by local officials in charge of the project. The land, when brought under control, is expected to mainly grow oil-bearing crops, cotton and green manure crop, officials said. The project is aimed at enabling the 35,200 peasant households in Quzhou and Nanpi counties in southern Hebei to earn an average per capita income of 174 U.S. dollars in real terms as against the current 91 U.S. dollars, a rise of 92 percent, officials said. And it will throw light on further experiments on the 3.3 million hectares of saline-alkali land in the North Chian Plain, they added. [Excerpt] [Beijing XINHUA in English 1221 GMT 8 Jun 83 OW]

RECORD WHEAT HARVEST--Shijiazhuang, 24 Jun (XINHUA)--Hebei Province has had a record harvest of 6.55 million tons of wheat and other summer grains, 1.85 million tons more than last year, the provincial agricultural bureau announced today. Hebei, Henan and Shandong provinces are China's biggest wheat producers. Timely rainfall and favourable weather conditions were among the factors behind this year's good harvest apart from the institution of a job responsibility system under which peasants are paid according to their output under contracts signed with their collectives. The total area under wheat and other summer crops was 2.4 million hectares across the province. More than 150,000 hectares of wheat fields were used to demonstrate new cultivation methods, the bureau said. [Text] [OW242157 Beijing XINHUA in English 1422 GMT 24 Jun 83]

COTTON PRODUCTION--Shijiazhuang, 24 Jun (XINHUA)--Hebei reaped a bumper harvest of cotton last year, with a total output of ginned cotton exceeding 772 million jin. Hebei now has over 10 million mu of cottonfields. Thanks to the bumper harvest, Hebei is able to deliver 307 million jin of ginned cotton to the state from September 1982 up to August this year for consumption in other provinces. [Summary] [OW280341 Beijing XINHUA Domestic Service in Chinese 0034 GMT 24 Jun 83]

BRIEFS

FORESTRY STATISTICS--Beijing, 16 Jun (XINHUA)--Statistics from 40 forestry bureaus in Heilongjiang Province show that, in the past 30 years and more, the province has accumulated 4.88 billion yuan by producing 318 million cubic meters of timber for the state. The annual volume of timber delivered to the state accounted for 35 percent of the total volume of timber allocated by the state. The province's present timber reserves have fallen to 797 million cubic meters from 1,017 million cubic meters during the early years of the PRC. Five of the 40 forestry bureaus have basically run out of forest resources, 15 are usable for another 10 to 15 years, 11 are usable for about 20 years and only 9 will remain permanently operational. By the year 2000, the annual timber output will drop to 3 million cubic meters from the more than 10 million cubic meters at present. [Excerpts] [OW280345 Beijing XINHUA Domestic Service in Chinese 1525 GMT 16 Jun 83]

REFORESTATION --As of 15 May, forest areas in Heilongjiang Province had pre-fulfilled the annual reforestation tasks by 5 days. The reforestation area increased by more than 20,000 mu over 1982 and the rate of up-to-standard planting reached 95 percent. Forest enterprises in the Mudanjiang forest area completed reforesting 480,000 mu in 20 days. [Summary] [Harbin HEILONGJIANG RIBAO in Chinese 21 May 83 p 1 SK]

BET ACREAGE EXPANSION--Harbin, 9 Jun (XINHUA)--China's leading beet sugar producer, Heilongjiang Province, planted 360,000 hectares of the vegetables this year, setting an all time record, according to provincial agricultural department. This northernmost province, which accounts for over half the country's beet sugar output, has been expanding its acreage annually. Last year it planted 276,000 hectares of beet, compared with 256,000 hectares of 1981. Overall beet sugar output has also been rising in recent years, the department said. In order to ensure a good harvest, about 2,000 technicians have been sent to growing areas to help with the planting, the department said. Efforts have also been put into expanding the province's capacity of sugar refineries from the present 470,000 tons to 520,000 tons. [Text] [OW161005 Beijing XINHUA in English 1222 GMT 9 Jun 83]

STRATEGIC MEASURES FOR WHEAT PRODUCTION OUTLINED

Beijing NONGCUN GONGZUO TONGXUN [RURAL WORK NEWSLETTER] in Chinese No 1, 1983

[Article by Liu Yingxiang [0491 2019 4382], Deputy Director, Henan Provincial Agricultural Commission: "Strategic Measures For Accelerating Development of Wheat Production"]

[Text] Since the Third Plenary Session of the 11th Party Central Committee, Henan Province has had bumper agricultural harvests year after year, and farming, forestry, animal husbandry, side-line occupations, and the fishing industry have experienced all-around development. Remarkable changes have taken place in the entire rural situation. Particularly gladdening has been the more rapid development of wheat production, which has not only broken the 20 billion jin gross output barrier in a reversal of the former longstanding situation of fluctuation with no forward movement, but has also taken new steps. The province's gross output of wheat increased by 4.6 billion jin in the 4 year period from 1979 to 1982 for an average annual increase of more than 1.1 billion jin. A major reason for such rapid development of wheat production has been a main thrust against intermediate and low yield areas to advance balanced increases in wheat output throughout the province.

On the basis of the province's agricultural production and cash income levels, we designated as intermediate and low production counties all counties with grain yields lower than 600 jin per mu and an average per capita income of less than 100 yuan. The province has 72 such counties. Most of these counties are distributed on the plains of the Huang, the Hua, and the Hai rivers and in hilly and mountain regions. These counties account for 62.3 percent of the province's population, 71 percent of its cultivated land, 60.5 percent of its total grain output, and about 60 percent of the wheat growing area. The main reasons for low wheat output in these areas is frequent natural disasters in the form of drought, waterlogging, wind, sand, salinization and alkalization. Production conditions have changed slowly, and ability to withstand disasters is poor. The land is infertile;

cultivation is extensive; and scientific and technical levels are low. Nevertheless, these areas have abundant resources; population is scant relative to available land; and potential for development is very great. Bringing these areas up to par is a strategic measure for accelerated development of the province's wheat production.

Practice has shown that improvement of intermediate and low yield areas plays a major role in accelerating the pace of Henan Province's wheat production. For example, in Nanyang, Zhoukou, Zhumadian, and Xinyang prefectures, which formerly had low outputs, wheat output grossed 11.4 billion jin in 1982, 4.45 billion jin more than in 1978 for a 1.11 billion jin annual increase. The wheat output of these four prefectures also rose from 31 percent of the province's total wheat output in 1978 to 48 percent in 1982. Six counties in the province each contributed more than 100 million jin; 28 counties each contributed more than 50 million jin; 21 communes each provided more than 10 million jin; and 40 production brigades each provided more than 1 million jin. An overwhelming majority of these were concentrated in former intermediate and low yield areas.

In recent years, Henan Province has taken the following several actions with respect to production in intermediate and low yield wheat producing areas:

1. Strengthening of leadership in intermediate and low yield areas. The province has directed its main attack against intermediate and low yield areas as a strategic measure for development of agriculture. Since the Third Plenary Session of the 11th Party Central Committee, the CPC Central Committee has blazed a new road in the development of agriculture. In 1979, Henan Province's gross output of wheat broke the 20 billion jin mark for the first time, yet yields averaged only 327 jin per mu largely because 69 counties and municipalities had yields per mu below the provincial average. This shows that the main element impairing rapid development of the province's wheat production is the large intermediate and low yield area, which exerts as drag. In order to increase intermediate and low yield area output as quickly as possible, Henan Provincial CPC Committee First Secretary, Comrade Liu Jie [0491 2638], personally went into intermediate and low yield areas to investigate, study, and help solve problems. In 1978, the province established a leadership group for the transformation of intermediate and low yield areas with the provincial governor, Comrade Dai Suli [2071 5685 3810] as director of the group. Some comrades in charge in the Provincial CPC Committee and provincial government went regularly to these areas to direct work and summarize representative experiences. All prefectures and counties placed transformation

of intermediate and low yield areas on their agendas of important things to do, and strengthened leadership in concrete ways. During wheat sowing season last year, Shangshui County transferred 67 comrades in charge above the Bureau CPC Committee level to low yield brigades in wheat growing areas throughout the county where yields had hovered around the 200 jin per mu level. These comrades helped solve real life problems in production with the result that the more than 120,000 mu of wheat in these production brigades averaged yields of 420 jin per mu, double the amount of the previous year, gross yields increasing 1.21 fold. The masses said happily, "Leading cadres came down the big slope and the party's policies brought a warm glow. Great changes took place in 1 year. Every slope had a lot of grain, and there was much money too."

2. Diligent implementation of rural policies centering around production responsibility systems. In order to effect rapid transformation of intermediate and low yield areas, we liberalized policies, instituted agricultural production responsibility systems principally in the form of "double contracting" [contracting of sole responsibility for production quotas and task completion to individual households], and linked results of commune members' work directly to their personal interests for an extremely great arousal of peasant enthusiasm for production. In 1981, 99.5 percent of the 44,972 production teams in Zhoukou Prefecture instituted large scale contracting of sole responsibility for task completion. Following such contracting, each and every household came to regard as a treasure the responsibility fields they had contracted. They farmed intensively and scientifically, and did not stint on investment of money or fertilizer, winning high yields. In 1981, commune members invested 345 million yuan in the purchase of chemical fertilizer and pesticides. Use of nitrogenous fertilizer increased 72 percent over 1978, phosphate fertilizer increased fourfold, and the number of hand tractors almost doubled. More than 1,400 pump wells were sunk, and more than 3,400 old wells renovated. More than 1,700 pieces of spray irrigation apparatus were added, more than 2,400 diesel engines and electric motors put in service, and the large livestock animals increased 56.4 percent. This further changed production conditions and promoted great development of agricultural production. In 1982, the prefecture's wheat output totaled 3.355 billion jin, 1.255 billion jin more than in 1978 for a 59.76 percent increase. Output of grain, cotton, and oil-bearing crops set all time records.

3. Adaptation of general methods to specific situations in the practice of scientific farming. During the past several years, the structure of agriculture and crop patterns were readjusted first of all in intermediate and low yield areas as local circum-

stances required. Formerly the sweet potato growing area was fairly large in intermediate and low yield areas. In these places, the sweet potato crop that preceded wheat was important; wheat was sown late, and wheat output was low. In recent years, the sweet potato area in intermediate and low yield areas has been reduced by more than 4 million mu, and the area planted to early wheat enlarged for an increase in wheat output. Second was use of superior varieties to meet needs. By 1981, 95 percent of intermediate and low yield areas were using superior varieties. Third was increased fertilization with organic fertilizer and phosphate fertilizer. A soil survey at key points in the province's intermediate and low yield areas showed most soil lacking in organic material and seriously lacking in phosphate. On the basis of actual experience in Xinpo Production Brigade in Runan County, all other production conditions being equal, wheat output varied greatly depending on whether or not phosphate fertilizer had been applied. In the case of "Bainong 3217," wheat yields varied by 201 jin per mu. For "Afu," the difference was 165 jin. Wherever phosphate fertilizer was used the wheat's ability to withstand hot dry winds was strong. In 1982, use of phosphate fertilizer in intermediate and low yield areas averaged 33 jin per mu, 12 jin more than during the previous year. Some places lacking adequate supplies of phosphate fertilizer increased fertilization with barnyard manure thereby achieving the goal of great benefits for small investment and low consumption. Fourth was adaptation of general methods to specific situations for all-around control. In recent years, intermediate and low yield areas throughout the province figured out quite a few methods of transformation. For example, places having a fairly good supply of water devoted efforts principally to harnessing the water for all-around improvement of the soil, doing all possible to tap potential, expanding the irrigated area, and increasing yields. Where water was in somewhat short supply, emphasis centered on soil improvement through deep plowing and leveling of the soil, building of small water conservation projects, increasing the soils ability to hold water and conserve moisture, and taking the path of organic dryland agriculture. Mountain regions coupled harnessing of the mountains, water, and the fields, and undertook large scale planting of trees and afforestation, to change the "microclimate," conserve water and soil, and store water for very good results.

4. Intensification of support to intermediate and low yield areas. In recent years both the Provincial CPC Committee and the provincial government have devoted extremely serious attention to intermediate and low yield areas, providing them vigorous material and financial support. Statistics show that during 1980 and 1981, in addition to the chemical fertilizer produced locally, the province allocated more than 900,000 tons of chemical ferti-

lizer to Nanyang, Xinyang, Zhoukou, and Zhumadian prefectures. Between 1978 and 1980, the province supplied 72 intermediate and low yield counties with 84,000 large and medium size tractors, 127,000 small tractors, 14.7 large and medium size tractor-towed farm implements, 7.8 small tractor-towed farm implements, 2.98 million diesel engines, electric motors, water pumps and such machinery for drainage and irrigation, more than 4,200 farm trucks, and 34,000 frame wagons. Between 1979 and 1981 the province supported 63; intermediate and low yield county people's communes with 46.07 million yuan. Since 1977, the Yancheng County CPC Committee has concentrated financial and material resources on the intermediate and low yield field areas that make up 40 percent of the county's' total cultivated land. Over a period of 5 years, it has allocated 1.07 million yuan and more than 2 million yuan in loans to bring about a fundamental transformation of production conditions in these places. The county's wheat output almost doubled from 240 million jin in 1978 to 437 million jin in 1982.

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HUBEI

BRIEFS

COTTON PRODUCTION MEETING--The Hubei provincial on-the-spot meeting on cotton production lasted 5 days and concluded in Tianmen County yesterday. The meeting stressed the study and implementation of the measures for strengthening the middle and final stages of cotton field management in order to reap a high yield. The area sown to a fine variety of cotton amounted to 3.94 million mu, which accounts for 47 percent of the total area sown to cotton seeds. After natural disaster prevention work, the province has basically ensured a full stand of cotton shoots on 8.34 million mu and laid a good foundation for a bumper cotton harvest. The meeting held that all places must ensure that 15 to 20 jin of urea is applied on each mu of cotton and they must step up control over cotton diseases and insect pests. [Summary] [HK241156 Wuhan Hubei Provincial Service in Mandarin 1100 GMT 16 Jun 83]

CSO: 4007/189

BRIEFS

FARM MACHINERY EXPORTS--Changsha, 21 Jun (XINHUA)--Hunan Province has exported 1 million U.S. dollars worth of farm machinery--primarily to Southeast Asian countries--in the first 5 months of 1983. Hunan Province began to export farm machinery in 1981, according to the Provincial Machinery and Equipment Import and Export Corporation. At the 1983 China Spring Export Commodities Fair held in Guangzhou, the province signed contracts to export farm machinery valued at 4 million U.S. dollars, more than double the 1982 figure, a spokesman for the corporation said. The spokesman said that the increase is due to high quality and rich variety of Hunan's farm machinery. The province is similar to Southeast Asian countries in production conditions and cultivation habits, so Hunan's farm machinery seems to suit the region well. Among the popular machinery, are small diesel engines, hand tractors, pumps, rice grinders and fodder crushers, he said. Hunan's farm machinery also goes to Australia, Britain and the United States, the spokesman said. The province has 160 farm machinery factories, turning out 110 kinds of products. [Text] [Beijing XINHUA in English 1204 GMT 21 Jun 83 OW]

CSO: 4020/95

JIANGXI

BRIEFS

HYBRID RICE—Jiangxi Province expects to plant 12 million mu of hybrid rice this year. Preliminary estimates show that 34 million jin of seeds are now on hand, enough to plant between 11 and 13 million mu of various kinds of rice hybrids. [Summary] [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 9 Jan 83 GW]

CSO: 4007/189

JILIN

BRIEFS

INSECT PEST CIRCULAR—The Jilin provincial government on 14 June issued an emergency circular urging all localities to prevent damage caused by beet webworms and the first generation of armyworms. According to the circular, beet webworms and the first generation of armyworms will appear extensively in the province, particularly in the central and western parts. The circular urges efforts to establish pest prevention leading groups to prevent insect pests in a timely manner. It also calls on plant protection departments to give pest forecasts and urges commercial departments to give timely supplies of insecticides. [Summary] [Changchun Jilin Provincial Service in Mandarin 1030 GMT 14 Jun 83 SK]

AFFORESTATION ACHIEVEMENTS—Since 1982, Jilin Province has planted 239.55 million trees during the obligatory afforestation campaign and fulfilled its tree-planting plan by 231 percent. Meanwhile, the province has planted 5.195 million mu of trees on its waste mountainous areas and wastelands. [Excerpts] [Changchun Jilin Provincial Service in Mandarin 1030 GMT 23 Jun 83 SK]

CSO: 4007/189

BRIEFS

FOOD INDUSTRY--Food industrial output value in Liaoning Province in 1982 reached 3,768,754,000 yuan, an increase of 15.1 percent over 1981. Taxes and profits handed over to the state totaled 820 million yuan, accounting for 11.86 percent of the total amount of taxes and profits turned over to the state by industrial enterprises. Some 400 food product varieties were researched and produced in 1982. [Summary] [Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 16 Jun 83 SK]

RICE-TRANSPLANTING ACHIEVEMENTS--Shenyang City, Liaoning Province, prefulfilled its rice transplanting task as of 27 May by 3 days. The city transplanted 1.3 million mu of rice seedling. [Excerpts] [SK280122 Shenyang LIAONING RIBAO in Chinese 29 May 83 p 1]

CSO: 4007/189

SHAANXI

BRIEFS

SOIL IMPROVEMENT LOAN--Xian, 19 Jun (XINHUA)--An agricultural loan of 10 million yuan has been issued by the Shaanxi branch of the Agricultural Bank of China for improving large tracts of arid highlands in Shaanxi Province, northwest China. The loan has been allocated to the loess area covering a total of 1.06 million hectares of land in 23 counties north of the Weihe, the largest tributary of the Yellow River. The fund will be used for buying phosphate and nitrogenous fertilizers to improve 260,000 hectares of land in this area. This will be combined with scientific farming to ameliorate the soil. The soil in this area is deficient in phosphorus and nitrogenous fertilizers by agricultural departments. [Text] [Beijing XINHUA in English 1113 GMT 19 Jun 83 OW]

CSO: 4020/95

FLOOD PREVENTION PREPARATIONS INTENSIFIED

Jinan DAZHONG RIBAO in Chinese 15 May 83 p 1

[Article: "Immediate Action to Prepare Against Floods Is Provincial Government's Call To All Jurisdictions at Provincial Conference on Flood Prevention"]

[Text] From 5 to 8 May, the Provincial People's Government held a provincial conference on flood prevention that called upon all jurisdictions to act at once and devote serious attention to preparations to prevent large floods and to combat major waterlogging to assure safe passage through the high water season.

The conference analyzed the new situation and existing problems in the province's flood prevention this year. It pointed out that the overall requirement in flood prevention work this year is adherence to a program of "taking prevention as the key link, prevention being more important than rescue," and to the principle of guarding against both drought and waterlogging, institution of centralized leadership, assignment of responsibilities level by level, full preparations in every regard, prudent movement, and strengthening of defenses to achieve within the standards of existing projects the security of the Huang He, no bursting of reservoir dams, no breeches along rivers, and no disasters resulting from waterlogging. Countermeasures should be taken against flood waters that exceed standards, and every available means used to guarantee the safety of the masses. The conference called upon all jurisdictions to organize forces at once to carry out a conscientious inspection of project safety, to inspect project quality, to make a major inspection of flood water carrying capacity, and to arrange problems in order of priority and urgency and devote strict attention to handling them. It is necessary to strengthen centralized planning and centralized drainage of water for the prevention of waterlogging and the draining of waterlogging in plains areas. There can be no impairment of the overall situation as a result of individual jurisdictions each going their own way. A flood prevention corps should be organized, rescue materials made ready, and emergency measures implemented to withstand particularly severe flooding.

Personal responsibility systems whereby leading cadres are responsible for individual reservoirs, for stretches of rivers, and for drainage projects should be continued, and city and town flood prevention work should be intensified.

The conference acknowledged that the struggle against flooding is a matter of major importance bearing on the overall political and economic situation and the safety of people's lives. CPC committees and government at all levels must devote a high degree of serious attention to it, genuinely strengthen leadership, and concentrate forces to take firm control in order to guarantee safety during the high water season.

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CSO:4007/163

COMMENTATOR ON FLOOD SAFETY

Jinan DAZHONG RIBAO in Chinese 15 May 83 p 1

[Article: "Prompt Action to Assure Safe Passage Through Flood Season"]

[Text] A good job of flood prevention this year holds extremely important significance for guaranteeing safety during the flood season, for harvesting a bumper crop, for hastening the building of the national economy throughout the province, and for guaranteeing the safety of the people's lives and property. In its flood prevention work this year, the province faces numerous circumstances and problems to which leaders at all levels and the broad masses of people should devote ample serious attention, act promptly, and make preparations to assure safe passage through the flood season.

Among some cadres a serious paralysis of thinking and a psychology of trusting to luck exists at the present time. They suppose that just because preparations have been made year after year for the past several years with no floods appearing that there will not necessarily be any heavy rains this year either. Some suppose that since we have large numbers of water conservancy projects, even if heavy rains do occur, there will be no problems. In particular, some leading comrades lack sufficient understanding of the new circumstances and new problems that have arisen in flood prevention following rural institution of contract responsibility systems linked to output. They are at a loss about what to do and do not know what work should be done. Some have yet to place preparations to prevent flooding on their daily agenda of important things to do. Unless these problems are solved, they will hurt prompt action this year in preparing against floods.

Meteorological forecasts call for a marked increase over past years in the amount of rainfall during the flood season this year, and flooding or waterlogging may occur in some prefectures. Since the lunar new year, the weather has been abnormal. During April, precipitation in most parts of the province has been

Double or triple the amount in normal years, and in some places the largest amount of rainfall in 60 or 70 years has fallen. Furthermore, analysis of historical data shows that great waterlogging frequently follows great drought, and that following several consecutive years of drought, there are several consecutive years of waterlogging. Therefore, one positively should not conclude that just because there has been a drought for the past several years that there will be no large amount of rainfall this year. Since founding of the People's Republic, the large numbers of water conservancy projects built in Shandong Province have certainly played a major role in fighting drought and preventing floods. Nevertheless, problems of fairly general low standards, poor quality, and hidden perils exist in the reservoirs, dams, and waterway projects that have been built, and when ordinary flooding occurs, the least amount of carelessness may cause accidents. Were large torrential rains and flooding to occur, the consequences would be hard to predict. For this reason, we must repair the house before it rains and act to prevent trouble by doing a good job in all preparations to guard against large scale flooding and to resist large scale waterlogging to assure safe passage through the flood season.

Resistance to floods and prevention of waterlogging is a large scale collective action that pits men in a struggle against nature. It is certainly not something that a single trade or profession or a single sector is able to undertake alone, much less is it something that a single family or household can handle. There has to be centralized organization, centralized leadership, centralized planning, and centralized action. At the present time, some places lack a correct understanding of how to handle the relationship between centralized flood prevention and contracting by individual households. In some cases a contradiction has even taken place between the interests of some units, sectors, and individual peasant households and flood prevention tasks. For example, some water drainage systems have been destroyed, and some people do not want to work because compensation for flood prevention is low. Fighting floods and guarding against high water bears on the overall situation and bears on each and every trade and profession, and on the interests and safety of millions of households. Everyone has a duty to prevent floods, and every unit, and every citizen must correctly handle the relationship between parts and the whole, and between current interests and long-term benefits and join actively in the struggle against flooding. Existing water conservancy projects and flood prevention facilities management must be strengthened and use centralized so that they play their full role. For newly built flood prevention projects, centralized planning, centralized direction, and centralized action is even more necessary. There positively can be no impairment to the overall situation as

a result of individual components going their own way. Leaders at all levels are to do more investigation and study, formulate specific methods to be used, properly handle problems in the use of labor for flood prevention work, in getting materials ready, and in the building and management of drainage projects to make sure that flood prevention preparations proceed smoothly.

The high water season is approaching, and leaders at all levels should have a full appraisal of this year's flood situation, and a complete understanding of the flood prevention situation.. "It is better to believe something will go wrong than to believe that it will not." A good job of preparations to prevent major flooding and withstand major waterlogging must be done, a worst situation scenario used for planning purposes, efforts made to achieve a best situation, and the initiative in flood prevention held firmly in hand to assure that no problems will arise during the flood season, and that there will be a fine situation of a consolidation of development throughout the province.

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CSO:4007/163

GRAIN AWARD SALES POLICIES TO BE CHANGED IN AUTUMN

Jinan DAZHONG RIBAO in Chinese 21 May 83 p 1

[Article: "Reform of Method of Making Award Sales of Fertilizer For Grain is Provincial Government Decision Beginning With This Summer's State Grain Purchases"]

[Text] The Provincial People's Government has decided to reform the system of award sales of chemical fertilizer for grain, final settlement price for purchases, and increased prices for excess procurement beginning with this summer's state grain purchases.

The method of making award sales of fertilizer for grain will be changed from the present one of making award sales of fertilizer on the basis of the monetary value of excess grain purchases to award sales of fertilizer based on the monetary value of the total amount of state grain purchases (figured at the centralized procurement price). No matter whether a collective or an individual, whoever delivers the grain gets the fertilizer. When households sell to the state, the chemical fertilizer award sale will be made to the household. The method to be used in final settlement of the price for delivery of grain will be direct payment to whomever delivers the grain. Where grain contract procurement and excess procurement quotas have been placed on households, households deliver the grain for sale, and final accounting is to be made with the household. Where contract procurement quotas have yet to be levied on individual households, a system can be instituted whereby final settlement is made with brigades when brigades deliver or households when households deliver. When grain contract quotas for the entire year are overfulfilled with summer grain in a single season, the method of paying the additional price for overfulfillment will be changed from the former disbursement of funds level by level from top to bottom to grain departments getting loans from local banks for prompt payment in the same season.

The foregoing decisions were promulgated by the Provincial Summer Grain State Purchase Work Conference, which closed on 17 May.

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CSO:4007/162

READINESS FOR 'THREE SUMMER JOBS' STRESSED

Jinan DAZHONG RIBAO in Chinese 21 May 83 p 1

[Article: "Get Ready to Meet the 'Three Summer Jobs' Head On"]

[Text] The hectic and busy production season of the "three summer jobs" [planting, harvesting, and field management] is about to arrive. One major characteristic of "three summer jobs" production is numerous jobs and a multitude of tasks to be completed in a short period of time. We must take effective action, use every moment, and hasten to do as much work as possible in advance.

This year the province's wheat growing area is large, and everywhere the wheat has grown better than in previous years, so the summer harvest will be strenuous. The area to be sown in summer has increased relatively, and intercropping of the wheat-fields will pose fairly numerous difficulties. Springtime sowing will be done rather late, and field care tasks will be arduous. All this poses increased difficulties for "three summer jobs" production. It must be realized as well, however, that as a result of the implementation of pertinent Central Committee documents in the province's farflung farming villages, and the further perfection of contract responsibility systems linked to output, the political enthusiasm and the enthusiasm for production of the broad masses of cadres and people is unprecedentedly high. State support to agriculture with funds, chemical fertilizer, machinery and such materials has been relatively prompt, and collectives and commune members have a fairly substantial material base. In addition, rainfall this spring has been fairly well distributed; soil moisture conditions are rather good, and favorable conditions are also very numerous. All that is needed is full use of these favorable factors and the carrying forward of the spirit of arduous struggle, and it will certainly be possible to complete the "three summer jobs" production tasks at high standards and high quality.

The period of the "three summer tasks" is the season when natural disasters such as drought and waterlogging, hailstorms, diseases

and insect pests frequently occur, so it is necessary to get ready to fight disasters to bring in a bumper harvest. The summer harvest must be made an urgent matter, forces concentrated, the role of farm machinery brought into full play, mutual assistance among commune members organized, every effort made to shorten the time required for harvesting, transporting, threshing, sunning, and storing grain, and overcast and rainy weather, mildewing, fire, and pilferage guarded against so as to avoid unnecessary losses. "Early" should be the watchword for summer planting, and a genuinely firm grip taken now on the intercropping of wheatfields. The program of "positively no slackening of grain production while actively initiating economic diversification" is to be fully carried out, and the relationship between grain crops and cash crops correctly handled. Summer-sown grain crops account for most of grain production for the year as a whole, so a sufficient amount must be planted well, energetic efforts made so that the summer grain will help the fall grain for new growth in grain output for the year. The growing area for cash crops such as cotton and peanuts must remain constant, with yields per unit of area being increased to assure steady increase in gross output. While doing a good job of summer harvesting and summer planting, care of spring-sown crops and the intercropping of wheatfields should be intensified to assure fully and vigorously growing stands of seedlings. In view of the possibility of drought and waterlogging disasters, mental preparation should be made and preventive actions taken in order to be ready before disasters strike, to combat them when they do come, and to rescue after they have passed to reduce disaster-caused losses to the minimum.

For some time to come, leaders at all levels must make "three summer jobs" production the central task in rural work. They should genuinely strengthen leadership, diligently change their workstyle, cut back on all kinds of meetings, and devote time to going into the frontline of production to help the masses solve real life problems. All trades and professions should vigorously support agriculture and actively contribute energy to winning total victory in "three summer jobs" production.

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CSO:4007/162

EFFORTS TO INCREASE COTTON YIELDS PER UNIT OF AREA STRESSED

Jinan DAZHONG RIBAO in Chinese 15 May 83 p 1

[Article: "Shift Toward Reliance On Science to Increase Yields Per Unit of Area in Cotton Production. Province's Cottonfield Area Stabilized This Year at Last Year's Level"]

[Text] The situations aired at the recently concluded Shandong Provincial Cotton Production Conference show that the sowing of cotton has been substantially completed in Shandong Province, that this year's cotton growing area has been stabilized at last year's level, and that the area on which new sowing techniques have been used has increased manifold.

Surveys conducted during recent years show a trend toward rationality in the proportional areas sown to grain and cotton. The Shandong Provincial CPC Committee and the Provincial People's Government have required that the emphasis in development of cotton production in all cotton growing areas be shifted from reliance primarily on increasing the growing area to reliance on scientific techniques for increasing yields per unit of area and total output.

This spring, all cotton growing areas in Shandong did a great amount of work in hastening the promotion of new techniques. Numerous places invited experts, professors, and scientific and technical personnel from inside and outside the province to talk to cotton growing peasants about new techniques such as the use of plastic mulch in the growing of cotton, and the growing of "Zhongmiansuo No 6." Cotton growing areas throughout the province trained a total of more than 1.5 million technical personnel of various kinds, and printed 6.2 million copies of scientific and technical data about cotton. Scientific and technical personnel signed technical contract agreements with cotton growing peasants for a 6.43 million mu cottonfield area.

As a result of efforts, everywhere in the province the use of new techniques for the sowing of cotton were tremendously increased. This included an increase in the area on which plastic mulch was

used from last year's 28,000 mu to this year's 1.57 million mu, an increase in the propagation of seedlings in nutrient pots from 3.3 million mu to 4.57 million mu, and an increase in the area sown to "Zhongmiansuo No 10" from 150,000 mu to more than 3 million mu.

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CSO:4007/163

BRIEFS

WHEAT PROCUREMENT--Peasants in Shandong Province' Weifang Prefecture have enthusiastically sold grain to the state. By 23 June, the prefecture procured 602.14 million jin of wheat, overfulfilling the summer grain procurement task and 300 million jin more than in the corresponding 1982 period. [Summary] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 24 Jun 83 SK]

SHANHE COUNTY WHEAT HARVEST--Shanhe County, Shandong Province, which is noted for its cotton production, has reaped a bumper wheat harvest this year. Its wheat output was over 250 million jin, a 20 percent increase over the 1981 figure. The county has increased its wheat output from 98 million jin in 1979 to 250 million jin in 1982, showing a yearly average increase of over 50 million jin. [Excerpts] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 23 Jun 83 SK]

TENG COUNTY WHEAT HARVEST--Teng County in Shandong Province reaped a bumper wheat harvest this year. The wheat production reached 500 million jin, 100 million jin over the corresponding 1982 period. [Summary] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 24 Jun 83 SK]

LINYU COUNTY WHEAT OUTPUT--Linyi County, Shandong Province, has reaped a bumper harvest from its 860,000 mu of wheat crop this year. Per mu yield reached 450 jin, an increase of 119 jin over the 1981 figure. Its wheat output reached 387 million jin, an increase of 110 million jin, and more than 40 percent over the 1981 figure. The county handed over 71 million jin of wheat to the state, an increase of 25 million jin over the 1981 figure. [Excerpt] [SK260552 Jinan Shandong Provincial Service in Mandarin 2300 GMT 25 Jun 83]

CSO: 4007/189

RISE OF PEASANT-CONTRACTOR ROLE HARBINGER OF DECOLLECTIVIZATION

Taiyuan SHANXI RIBAO in Chinese 29 Mar 83 p 3

[Article by Chen Xiwen [7115 6932 2429]: "A Brief Discussion of Peasant Households Contracting Small River-Harnessing Projects"; portions within slantlines in boldface]

[Text] Since last winter and this spring, a new phase in the mass work of soil and water conservation centering on peasant households contracted for small river-harnessing projects has come into sight on Northwest Shanxi's loess plateau.

For a number of years, since soil and water conservation work on the loess plateau was set in motion, the collective organizations of the communes and production brigades in the rural areas have played a principal role in small river-harnessing projects. At present, a new form of river-harnessing with thousands or tens of thousands of peasant households functioning as contractors in a myriad of ditches and gullies has taken shape. Is the emergence of this new form of river-harnessing feasible? And is there a relatively greater superiority in adoption of this new form of river-harnessing? This is of crucial importance to the question of whether we should go all out energetically promoting river-harnessing with peasant households as contractors. An explanation is necessary.

/River-harnessing by peasant-household contractors is a natural outcome of the further development of the system of responsibility for linking planned output with contracted work in the rural areas./

In the last 2 or 3 years, a system of responsibility for linking planned output with contracted work, which proceeds principally from contracting a unit for completion of large-scale tasks, has attained an extensive popularization in the vast rural areas of Northwest Shanxi. After implementation of the contract system, significant changes have taken place in the economic relations of the rural areas, thereby inevitably creating a powerful impact on small river-harnessing projects within the domain of soil and water conservation.

I. /Division of agricultural management by individual peasant households has created an inevitable transformation in the mainstay of small river-harnessing

projects./ In the wake of the implementation of Da Bao Gan, peasant households have undergone a transformation from an original consumer unit to a basic production unit. The contracting by peasant households of farmland owned by production brigades has consummated independently all the processes of production, and it has also established a direct economic and technical relationship with the state functioning departments that render services to agriculture before, after and during production. Once the leading role of peasant households in the management of agriculture is recognized and established, much of the economic functions of production brigades falls onto families of the peasant households. The fall of the economic functions of production brigades and the rise of the leading role of peasant households in management of agriculture have created capabilities of channeling part of the accumulated capital and surplus labor force into small river-harnessing projects.

11. Coming simultaneously with the development of the system of responsibility for linking planned output with contracted work is an inevitable expansion of "contracting" peasant households for small river-harnessing projects./ The peasant households that have contracted land for farming, after having gained nourishment from and made profits out of "contracting" and after having experienced the sweetness of "contracting" following the passage of one or two production periods, will ultimately embark on a course of seeking from "contracting" first a life of sufficiency and later a life of affluence. They will then come up with a demand that wider and broader access to production be made available to them, so that their capital and labor force, already showing relative surpluses on the land they have contracted for farming, could be integrated with a much greater diversification of resources, thus creating richer and more abundant fruits of labor. With the peasant households already contracted for cultivation of farmland, what are the other things for "contracting"? A very important point here is that the latter must proceed from the conditions of the resources of the area. The villages and production brigades on the loess plateau of Northwest Shanxi are located mostly in the midst of a vast encirclement of unbounded ditches and gullies. In an area like this, consisting mainly of ditches and gullies besides farmland, a spontaneous and primary option of the peasants is to make ditches and gullies a place of investment. Naked ditches and gullies are not just a target of harnessing. They are also resources for utilization and exploitation. The peasant households that are destitute of farmland may contract to build dams in basins and to repair terraced fields. And the peasant households that are in pursuit of economic diversification may also contract to plant trees and grasses or to raise poultry and domestic animals. In short, river-harnessing by contractor peasant households is a natural product of the integration of two different matters--the objective harnessing of the development of the system of responsibility for linking planned output with contracted work, integrated with the distinctive features of the resources of a locality on Northwest Shanxi's loess plateau.

12. The river-harnessing program, viewed from a long-term research point of view, will definitely embark on a course of development that will enable peasant households to play a key role as river-harnessing contractors.

In the past, when the collective organizations of the communes and the production brigades were mainly responsible for the river-harnessing task, efforts had been made to hammer out a greater diversification of the organizational forms of river-harnessing. Nevertheless, as the people had seen for themselves, the various river-harnessing forms of the past produced less superior results and a more inferior outcome. In order to create a new situation in the river-harnessing task, it is first and foremost an imperative necessity to make a change in the previous practices of "doing things in a massive and unplanned way" and "eating rice out of a big common pot," which had existed in the various forms of organizations and found manifestation not only in a dislocation among river-harnessing and river-management and river-maintenance, but also in a separation of those who did the work from those who received the benefits. The next imperative need is the creation of a form of organization capable of ensuring that river-harnessing is integrated with river-management and river-maintenance and river-beneficiaries, that responsibility and privilege and benefit are clearly defined. The contract system which in form is a system of responsibility in agricultural production, has precisely furnished the two "imperative needs" of the small river-harnessing program with an experience of success from which one can draw a direct lesson. Like the planting industry, a mainstay of the small river-harnessing program has to be an individual peasant household functioning as a basic unit. Each ditch or gully, which constitutes a small river, is a most elementary and natural unit causing the phenomenon of water and soil loss on the loess plateau. In the final analysis, it is still necessary to proceed from a small river-harnessing program in order to stop water and soil loss on the loess plateau.

Peasant households in doing their jobs possess the features of independence, whereas rivers in a locality are in possession of the characteristics of divisibility. This provides a possibility of integration between peasant households and small rivers. The integration of these two units--a basic production unit capable of harnessing rivers integrated with a basic natural unit in need of being harnessed--is not only in line with the current structural form of the productivity organizations in the rural areas, but also in compliance with the objective requirements set forth by the natural world in soil and water conservation work on the loess plateau.

An analysis of the feasibility and superiority of river-harnessing by peasant households functioning as contractors./

The harnessing of small rivers by peasant households functioning as contractors has at least the following aspects of feasibility.

1. Peasant households can achieve in the course of harnessing rivers a gradual accumulation of capital for financing the river-harnessing program./ Irrespective of whether it is centered on engineering measures or on biological measures, or on an integration of the two measures, the small river-harnessing program requires a definite amount of investment. In the past, the small river-harnessing program had to be abandoned, because many communes and production brigades could not raise the amount of capital for the

program. However, when peasant households are made river-harnessing contractors, the specific economic functions of such households have made it possible for them to achieve in the course of river-harnessing a rapid accumulation of capital for the program, simply by banking on their own economic prosperity and multiplication. When a peasant household takes its place with "household" as a basic unit, it possesses in terms of capital the self-advancing function. On the one hand, it will strive on the basis of its own skills and opportunities to develop all available means of production before maximizing the maximum the volume of values it is capable of creating. On the other hand, it will strive on the basis of the needs of production to reduce to the minimum monetary spendings on simple reproduction, thereby increasing additional investments for expanded reproduction. It is precisely for this reason that peasant households can not only surpass the original production cooperative economic setups in accumulation of capital, but are also able to run a "business without investment" under definite conditions as long as they are granted the right to use resources, thus accumulating capital and the capital essential to expansion of production. Moreover, by allowing individual peasant households to function as river-harnessing contractors, it is possible that a portion of the idle money held in the hands of the peasants will be absorbed and converted into river-harnessing capital, since this capital belongs entirely to the families of peasants. They will therefore "pull every penny and make every penny count." For example, the actual percentage of afforestation in Xingxian County was 95 yuan in state investment. During last winter and this spring, when 13 households of peasants in the Guo Jia Chi Tai Production Brigade of this county were planting trees in the course of harnessing small rivers, the charge for the afforestation was only 5.30 yuan, saplings and labor costs included.

2. Peasant households can achieve in the course of harnessing small rivers the same results as those achieved by river-harnessing techniques.

The position of paramount importance to harnessing small rivers is held by the very small number of grassroots technicians and technicians in the field. In the bureau of soil and water conservation, for example, there are only four technicians, all of whom are of middle and junior college background. Many of them are the product of a long campaign put during the Cultural Revolution. They are not in a mood to learn skills and techniques, as required by the objective needs of the program. The river-harnessing contractors with rights to harness small rivers are able to master gradually the techniques of harnessing rivers. From the point of view of the peasant households in the course of harnessing small rivers, there are two major sources.

1. Self-study. What Zhao Xingyu, a peasant in the Guo Jia Chi Tai Production Brigade, Fu Ming County, Henan Province, said was translated as follows: "I did not even know the technique of harnessing small rivers in order to master this technique."

the age of 60, by relying on his cultural level of Trimetrical Classic and Thousand-Word Book he had studied when he was 4 years old, read three books on the techniques of cultivating fruit trees. He studied and learned while he was working. The fruit trees he planted were all grafted and transplanted from the wild fruit trees dug out in the mountains. Yet, under his meticulous care and management, the output of apple trees went up by 1,000 jin each year throughout fat or lean years since 1976. By 1982, the total output of 55 apple trees was in excess of 5,000 jin. And in the light of technical guidance publications distributed in the county, he acquired techniques on storage of fruits, continued a summation of experience through practice, and made a revision of the contents of those publications not compatible with reality. For years in a row, the apples he had stored up were able to safely get through the winter and to come out of storage in perfect condition the following year when new apples were being sold on the market.

The second source of learning is "borrowing from others." A peasant household, after becoming a river-harnessing contractor, has to rely entirely on himself for acquisition of some techniques. But distant water cannot extinguish a nearby fire. He must, therefore, strive by all means to borrow techniques from those who are already armed with techniques. Niu Genlai (1962-1970-0171), a commune member of Kang Ning Production Brigade, Kang Ning Commune, Xingxian County, was a contractor at a Yu Jia gully. The first thing he did after becoming a contractor was to administer well and make good use of nearly 2,000 apple, pear and apricot trees which did not bear fruit and were left out in the gully by the production brigade that had planted them. He took his whole family out to the gully, fertilizing and watering the fruit trees. Being completely ignorant of the techniques of pruning and orthopedics, he asked a technical man in a county nursery to do the job of pruning and orthopedics for him. As a result, the fruit trees which had not yielded any income under the management of the production brigade produced an income of almost 2,000 yuan for that year. Moreover, Niu Genlai was also a contractor raising seven deer. He knew how to raise deer, but he did not possess the technique of cutting and processing deer antlers. By applying the same method, he went out to look for and came back with a teacher knowing antler-cutting and antler-processing techniques. In that year he processed and sold 4 jin of deer antlers, thus earning an income of 1,100 yuan.

Taking place simultaneously with the development of the Bao Gan System and the Contract System is a corresponding growth of the peasants in their mastery of access to techniques. "Learning as an individual" is currently developing in a direction leading to "learning as an organized group." Example: The bureau of soil and water conservation in Xingxian County has adopted a decision in connection with the establishment in 1983 of a training class for organizing 300 river-harnessing peasant contractors to study harnessing techniques of all categories. And now "borrowing from others" is proceeding on the road to "mutual relationship." At the level of counties and communes, some technical men of soil and water conservation as well as water conservancy and afforestation, working in conjunction with some technical cadres of communes and production brigades, are today establishing a constant technical relationship with peasant households functioning as

river-harnessing contractors, thus rendering possible an integration of the technical know-how of the technical personnel with the capital and the labor force of the peasant households for use in harnessing of rivers. It can be imagined that in the conditions of a further motivation of the cooperative economy and in the wake of a development of the technical contract system and the consultant industry, peasant households will become all the more diversified and be able to move faster in mastering access to technology.

III. /In the course of harnessing rivers, peasant households can achieve a life of affluence./

In the years of "doing things in a massive and unplanned way" and "eating rice out of a big common pot," the peasant households were not able to acquire direct river-harnessing benefits. As a result, many production brigades were in debt and there was a decline in the income of commune members. When peasants become river-harnessing contractors, small valleys are not merely an objective of the peasant households for investment of their capital and labor, but also an area of resources for their full utilization. With resources merged into labor contributed by peasant households, it becomes possible to create wealth of a vast magnitude. Here the process of harnessing gullies and the process of peasant households getting rich are a process of unanimity. Zhao Mingyou, an old peasant of Lu Jia Production Brigade, Pu Ming Commune, Lanxian County, spent 20 years harnessing gullies, and his income kept increasing year after year. The income of his household last year amounted to 3,790 yuan, an equal income of 1,895 yuan for each of the two elderly people.

It is precisely because of this unanimity between harnessing gullies and getting rich that one may disregard the question of whether the peasant households are subjectively well aware of what their conduct would mean to soil and water conservation, as long as the peasant households are hoping to attain a long-range and daily-increasing economic interest. Objectively, however, the process of getting rich marches hand in hand with the process of harnessing gullies.

The feasibility of contracting peasant households for the river-harnessing program is in itself an elucidation of the superiority of the program. Beyond any shadow of doubt, by entrusting the families of peasants with the task of harnessing rivers, a giant leap forward of greater dimension than in the past will be achieved, either in magnitude of popularization, in tempo of development, or in quality of harnessing.

/A Number of Questions Requiring Further Study/

The small river-harnessing program is, on the one hand, not the entire contents of the soil and water conservation work on the loess plateau. The form of harnessing with peasant households as contractors is, on the other hand, just beginning to take off. Therefore, there are still quite a number of questions requiring further study and solution.

I. /Relations Between Divided Harnessing and Unified Planning/

A direct motivating force of the willingness of the peasant households to work as small river-harnessing contractors comes from the fact that small valleys are an area of resources for utilization. Generally speaking, a goal of the peasants is to get rich by making use of such resources. The act of harnessing rivers to prevent loss of soil and water is but an objective result acquired in the course of becoming wealthy. This is similar to the continual efforts of peasant households tilling and fertilizing their farmland in anticipation of achieving a sustained higher production.

In the course of harnessing small rivers, the peasant households may adopt a specific form of harnessing by proceeding from their conditions and requirements of capital, labor, and technology. It is, therefore, possible that they may start with engineering measures as a principal objective--such as mainly building dams in basins, or with biological measures as a key goal--such as mainly planting trees and growing grasses, or with both the engineering measures and the biological measures integrated into one entity. Nevertheless, no matter which form is adopted for implementation, as long as it is capable of truly reducing the volume of water flowing on the surface of the earth and minimizing the erosion of mud and sand out of ditches and gullies, one must admit that what the peasant households have done is the harnessing of small rivers. How, then, can this river-harnessing by individual peasant households be merged into the work of soil and water conservation on the entire loess plateau? This requires, necessarily, unified planning.

A small valley, as compared with farmland, has a peculiarity of its own. Example: The predatory mode of managing farmland can only cause damages to the soil fertility of a plot of farmland, and it affects its neighboring farm plots very slightly. Conversely, the predatory mode of managing small river valleys can bring serious damage to farmland and river channels in the lower reaches of the valleys, because of the aggravation of loss of soil and water. The various river-harnessing measures must take into account the capabilities of resisting and reducing natural calamities of a considerable degree, otherwise the harnessing effects not only may be suddenly destroyed one morning, but also may create unexpected incidents of a disastrous nature. The river-harnessing program demands that measures of a comprehensive nature be adopted internally and that considerations be given to a mutual relationship which exists within a grand system of valleys, that is, the upper-lower relationship and the left-right relationship between a small valley and another small valley, between a small valley and a relatively big valley within a definite area, and even between valleys of one river system and valleys of another river system. These river-harnessing peculiarities not only explain the necessity of unified planning, but also set forth some substantial contents of unified planning. Example: All conduct which may aggravate loss of soil and water in the name of harnessing should be prohibited by promulgated orders. Some harnessing measures, notably the dam-building projects of a relatively grand scale in gullies and ditches, should be submitted to the departments of technology for examination and approval of construction sites, technical criteria of engineering projects and quality

of construction work. The government, in consideration of the effects of a systematic harnessing of river valleys, retains the power of setting forth some specific demands on harnessing of ditches and gullies. To sum up, divided harnessing should be integrated with unified planning, so that the work of soil and water conservation may achieve unanimity in microeconomic and macroeconomic results.

II. /Correct Handling of Relations of Interests Among Peasant Households/

After a popularization of the harnessing of rivers by peasant contractors, it is necessary to handle correctly two questions of relations among peasant households.

One question is the correct handling of relations between contractor households and noncontractor households. Contracting a harnessing project is different from contracting a farm plot. When a peasant is contracted for a harnessing project, what the state demands of him primarily is the result of harnessing, not how much of the product of his labor he turns in for sale. This requires that peasant households which are contractors must possess a definite capability in the areas of capital funds, labor force and technical know-how, that those who have greater harnessing capabilities must have more contracts to work for, that those who have no harnessing capabilities must not be given contracts and that practices of equalitarianism not be permitted.

The second question is the correct handling of the relationship between the early-contractor households and the late-contractor households. Generally speaking, what the early-contractor households have contracted are usually those ditches and gullies of relatively better geographic locations or more superior natural conditions, whereas the later the contracting, the worse the conditions. If this relationship is not handled correctly, an inevitable result is that nobody would be willing to contract a considerable portion of the ditches and gullies. In view of this state of affairs, communes and production brigades may collect more revenues from peasant households whose contracted ditches and gullies are of better conditions, and then use such revenues to finance the peasant households whose contracted ditches and gullies are of worse conditions. This will enable the late-contractor households working in the conditions of an equal contribution of labor to acquire just as great benefits as are given to the early-contractor households.

III. Appropriate Administering of Relations Among Various State Functioning Departments/

The capital and technical force that can be pumped into the small river-harnessing program by the state are currently being split up and used in the various functioning departments of agriculture, forestry, water conservancy, soil and water conservation, with which the river-harnessing program must inevitably maintain ties of relations. Therefore, a comprehensive utilization of the capital and technical force of the various departments will play a very important role in accelerating the river-harnessing program and in elevating the effectiveness and benefits of the state capital and technical force. The aforementioned functioning departments of the state must maintain a mutual coordination in river-harnessing, thereby bringing into full play the limited capital and technical force of the state.

SHANXI

TWO MILLION MU OF COTTON HAS SPROUTED IN YUNCHENG PREFECTURE

Taiyuan SHANXI RIBAO in Chinese 1 May 83 p 1

[Article: "Two Million Mu of Cotton Has Sprouted in Yuncheng Prefecture. Scientific Techniques Valued; Fertilizer Used Sensibly"]

[Text] The job of planting 2 million mu of cotton in Yuncheng Prefecture has been completed, and quality is better than in previous years.

Yuncheng Prefecture is the province's major cotton and wheat growing area, and CPC committees and government departments at all levels have been extremely attentive to cotton production. Following last year's bumper cotton harvest, all jurisdictions summarized experiences and made up their minds to do an even better job of cotton production. Last winter and this spring, prefecture and county agricultural departments ran technical training courses that trained a total of 400,000 people in the techniques of plastic mulching, cotton farming, propagation and transplanting of seedlings, and prevention and control of diseases and insect pests. Before cotton sowing began this year, leading comrades in the Prefecture CPC Committee and government offices called together cotton growing experts, old peasants, and technicians for joint discussion of technical problems in the sowing of cotton. During late March, a fortuitous rain fell throughout the prefecture, and the broad masses of cotton growing peasants wasted no time in getting pre-sowing preparations underway. With the arrival of April, one county after another began planting.

The following has characterized cotton planting this year: 1. Use of plastic mulch over a wide area. Last year, plastic mulch was used over a 113,000 mu area for yields averaging 145.7 jin per mu. This was more than 50 jin per mu more than from control fields. As a result of practice, the broad masses of cotton growing peasants came to realize the superiority of this method, so this year the use of plastic mulch has been spread actively over more than 620,000 mu in the province. 2. Ample base fertili-

zer. Barnyard manure applications averaged 4.3 cartloads per mu, 0.2 cartloads more per mu than last year's average. In addition, 19.4 jin of nitrogenous fertilizer and 19.1 jin of phosphate fertilizer per mu were used. 3. Full use of the role of technical mainstay cadres. Hejin County organized 20 agronomists and technical personnel to go into 11 communes throughout the county to convene on-site meetings of specialized households, major households, and technical personnel engaged in experimental plantings. They both taught plastic mulching and cotton growing techniques, and trained technical mainstay cadre corps. Each jurisdiction also signed cottonfield technical contract agreements.

Right now cotton seedlings are beginning to sprout everywhere, and the broad masses of commune members are going from field to field to examine the seedlings carefully and replace seedlings that did not come up.

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STEADY INCREASE IN PLASTIC MULCHING OF COTTON

Taiyuan SHANXI RIBAO in Chinese 1 May 83 p 1

[Article: "Provincial Cotton Institute Promotes Plastic Mulch to Make Major Contribution. Adherence to Combined Program of Experimentation, Demonstration, and Promotion"]

[Text] The Cotton Institute of the Shanxi Provincial Academy of Agricultural Sciences has adhered to a program that emphasizes service to production, and that combines experimentation, demonstration, and promotion. For 5 consecutive years since 1979, it has conducted demonstrations in all cotton growing areas of the province of results achieved in research on the use of plastic mulch on cottonfields. Over the past 5 years both the size of the demonstration area and the number of demonstration sites have increased. This year there are 13 sites in the province, and the demonstration area covers a more than 81,000 mu area for a major contribution in the spread of the new technique of plastic mulching to wide areas throughout the province.

In order to change the province's low and inconsistent cotton output, in 1976 the Provincial Cotton Institute began experimentation and research on the plastic mulching of cotton fields. By 1978 preliminary results had been gained. In 1979 they carried out experiments and production demonstrations at the same time, demonstrating the growing of cotton on a total of 6 mu at four sites including the institute itself, and at Nanjing, Xincheng, and Nanzhang in Wanrong County. Results were an increase in yields of ginned cotton averaging 45.6 jin per mu on drylands, an 82.5 percent rate of increase. In 1980, the Provincial Cotton Institute set up 20 sites in nine counties and cities in Yuncheng, Linfen, and Jindongnan prefectures for an increase in the size of the demonstration area to 44.9 mu. A fine harvest from wetlands and drylands with increases in ginned cotton averaging 63 jin per mu were obtained for a 54.5 percent rate of increase. In December of the same year, they conducted an authentication of these results under auspices of the Provincial Academy of Agricultural Sciences, and with the participation of both the Cotton Institute of the Chinese Academy of Agricultural

Sciences and experts concerned as well as comrades in charge at the various demonstration sites throughout the province. The major practical value of ground mulch culturing techniques for cotton production were confirmed.

With the authentication of this scientific and technical accomplishment, with the help of departments concerned in the province, prefectures, counties, and communes, in 1981 the Provincial Cotton Institute again conducted sample demonstrations of the use of plastic mulch on 10 1,000 mu plots in seven counties in Linfen, Yuncheng, and Jindongnan prefectures. Despite a summer drought, autumn waterlogging, and an early frost that year, tremendous increases in yields were obtained. The broad masses of cadres and people unanimously praised plastic mulch culture as being good in producing full stands of seedlings early and high yields.

In order to translate plastic mulch culturing techniques into productivity as quickly as possible, scientists and technicians at the Provincial Cotton Institute not only printed a large amount of materials, but also used periodicals and appropriate gatherings to give widespread publicity. Principal comrades in charge at the institute also took propaganda materials and tape recorders with them as they made speeches for more than a month throughout the province, greatly publicizing, greatly stirring, and listening at first hand to reports from more than 70 cadres and technician personnel engaged in the publicity. They spread information to a total of more than 310,000 people. At the same time they also received more than 4,000 people who had come from all over the country to inspect and study, and they trained more than 600 technical personnel for the eight fraternal provinces of Hebei, Henan, Jiangsu, Anhui, Zhejiang, and Shandong.

Thanks to the energetic work and cooperation of the Cotton Institute, the cottonfields using plastic mulch in the province this year cover an area of more than 900,000 mu. This includes 620,000 mu in Yuncheng Prefecture, and sets the stage for winning a bumper cotton harvest over large areas throughout the province.

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SHANXI

PLASTIC MULCH AREA EXPANDED

Taiyuan SHANXI RIBAO in Chinese 1 May 83 p 1

[Article: "Plastic Mulch Used on 1 Million Mu Area in Province. Look to Science For Yields; Rely on Science For Bumper Harvests"]

[Text] The reporter obtained the following from the Special Economic Office of the Provincial Department of Agriculture: This year new plastic mulching techniques will spread over a more than 1 million mu area in the province.

Plastic mulching is a new technique that produces remarkably increased yields, which has developed very rapidly in Shanxi Province in recent years. In 1979, experimental use of plastic mulch on cottonfields was carried out on an area of only 400 mu in the province. By 1982, the area had grown to 200,000 mu. Since last winter the broad masses of peasants have actively pooled funds, ordered thin plastic sheets, prepared sufficient fertilizer, selected superior variety seeds, and readied the land for widespread use of plastic mulch. Since the lunar new year, all areas in the province from south to north have gone in for the use of plastic mulch. As of late April, plastic mulch had been used on a more than 900,000 mu cottonfield area in the province. In Yuncheng Prefecture alone, plastic mulch was used on 623,000 mu of cottonfields. The use of this new technique for melons, vegetables and other crops as well means that the area in the province on which plastic mulch is to be used may well be greater than 1 million mu.

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SHARP INCREASE IN COLLECTIVE INCOME DISTRIBUTED TO PEASANTS

Taiyuan SHANXI RIBAO in Chinese 1 May 83 p 1

[Article: Marked Increase in Distributions of Collective Earnings to Peasants in Province. Collective Earnings Distributed in 1982 Averaged 136.70 Yuan Per Capita, 57 Yuan More Than in 1981"]

[Text] Figures provided recently by the Provincial Statistical Bureau show distribution of collective earnings to peasants in the province to have been 136.70 yuan in 1982, 57 yuan more than the 79.60 yuan of 1981. Furthermore a group of counties, communes, and brigades with fairly high per capita distributions of collective earnings appeared.

Counties (or districts) having average per capita distributions of collective earnings of more than 200 yuan increased from three in 1981 to 14. Some counties that had been poverty stricken for a long period of time such as Zuoyun County and Pianguan County had per capita peasant earnings from collective distributions in 1982 of 296.20 yuan and 252.40 yuan respectively. Communes having average per capita distributions of collective earnings of more than 200 yuan rose from 182 in 1981 to 238. Production brigades having average per capita earnings from collective distributions of more than 300 yuan rose from 314 in 1981 to 1,181. This included seven production brigades with average per capita earnings of more than 1,000 yuan, and 16 with average per capita earnings of more than 800 yuan. In Zuoyun County, the Zhangjia-wen Production Brigade had average per capita earnings from collective distributions amounting to 1,372.80 yuan.

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SHANXI

DRYLAND FARMING TECHNIQUES STUDIED

Taiyuan SHANXI NONGYE KEXUE [SHANXI AGRICULTURAL SCIENCES] in Chinese No 3, 20 Mar 83 p 26

[Article by Liu Dundao [0491 2415 6670] and Wang Shulou [3769 2885 2869], Shanxi Agricultural University, and Li Zhichao [2621 1807 6389], Yuanping Agricultural School: "Study of Dryland Agricultural Techniques"]

[Text] By way of exploring ways to obtain high yields and increased earnings from dryland agriculture, during summer vacation in 1982 we made a preliminary survey lasting several months in some counties of Yanbei and Xinxian prefectures, and in Nei Monggol, Ningxia, Gansu, and Qinghai.

Significance, Position, and Potential of Dryland Agriculture

Dryland agriculture is also termed rainfall-supported agriculture, with agricultural production depending largely on natural precipitation. Shanxi Province is in a semi-arid area where annual precipitation is between 400 and 680 millimeters, but is spread unevenly both seasonally and from one year to another, droughts frequently resulting. Statistics for 31 years since founding of the People's Republic show partial drought in the province every year. Spring drought occurred in 26 years for an 83.7 percent occurrence rate. In 12 years, or 38.7 percent of the time, drought was serious. In most years the drought affected an area of from 1 million to 10 million mu, and in serious drought years it affected more than 20 million mu. In 1960, the entire province had a spring drought that reduced grain output by 1.4 billion jin. In 1965, a summer drought and a fall drought were followed by a winter drought. Output for that year fell by 1.3 billion jin. In the following year summer grain output decreased by 1.7 billion jin. Obviously drought is a great threat to agricultural production in Shanxi Province.

Shanxi Province has 58.86 million mu of cultivated land of which 16.82 million mu is wetlands, including about 14 million mu or 24 percent of which is maintained through irrigation. At the pres-

ent time, conditions for increase in irrigated land are extremely limited. The province has 11.68 billion cubic meters of surface water and 5.55 billion cubic meters of ground water or 702 cubic meters per capita. This is one-fourth the per capita amount for the country as a whole, and one-sixteenth the per capita amount for the world. The province has numerous mountains and few rivers; the land is high and water is low; ravines crisscross the land fragmenting the topography, and about 82 percent of the surface water cannot be put to use. In addition, ill-advised development has brought about a tremendous decline in the amount of ground water. For example, near the county seat in Taigu County, wells were about 10 meters deep in the 1950's, between 30 and 40 meters deep in the 1960's, and about 80 meters deep in the 1980's. In less than 30 years, the water table has dropped more than 70 meters. Worse yet, in 1979 alone, the water table in Jincheng County fell between 18 and 25 meters and more than 300 shallow and medium deep wells had to be abandoned. Only 330 of 812 pump wells had water in them. Since the 1970's, the water table in Yuncheng County has dropped more than 30 meters, and in Jinjing Commune with a heavy concentration of wells, it has fallen between 40 and 60 meters.

Shanxi is an energy base for the entire country where the conflict between industry and agriculture for water is becoming increasingly great. Water conservancy zoning shows that by the end of this century, the irrigated farmland area will increase to 25 million mu at most, and that 70 percent of all farmland will remain drylands. Thus, dryland agriculture must largely dominate thinking.

Just how great is potential for increased yields from dryland agriculture? Measurements made in 1972 on three different plots of land of different fertility in Dongguanzhuang Production Brigade in Wenxi County showed that on infertile drylands producing wheat yields of 210 jin per mu, 1 millimeter of precipitation could produce 0.52 jin of wheat. On moderately fertile dryland producing 435 jin per mu, 1 millimeter of precipitation could produce 0.99 jin. On highly fertile dryland producing yields of 650 jin per mu, 1 millimeter of precipitation could produce 1.36 jin. Annual precipitation averaged 521.3 millimeters in that production brigade, and 1,500 mu of dryland wheat produced yields of 400 jin per mu continuously for 10 years. In 1972, yields rose to 872 jin per mu. Jinzhuang Production Brigade in Yaguan County averages 626 millimeters of precipitation each year. Each year since 1971, 400-odd mu of dryland millet has produced yields of 800-odd jin per mu except for one year when yields were slightly more than 700 jin per mu. Despite major drought in 1979, yields were still 900-odd jin per mu. Naturally, if high yields and increased earnings are to be rea-

lized from dryland agriculture, multiple agricultural techniques will have to be used.

Several Techniques For Dryland Agriculture in Shanxi Province

1. Firm Grasp of Farmland Capital Construction

Shanxi Province's total area is 234.4 million mu, more than four-fifths of which is mountainlands and hills. Most of the soil consists of loess mother material, which is loose by nature. Seventy percent of annual precipitation is concentrated in July, August, and September, and runoff of water, soil, and fertilizer is extremely serious. Measurements made by the Provincial Water Conservation Institute show an annual scouring away of between 0.7 and 1 centimeter of topsoil annual in the loess hill region of northwestern Shanxi. This amounts to between 7 and 9 tons per mu. Annually 290 million tons of silt flow into the Huang He taking with it 6.25 million tons of nitrogenous, phosphate, and potash fertilizer. The amount of nitrogenous fertilizer by itself equals more than two times the amount that the state supplies this area. The topsoil is becoming less and less fertile, and the cultivated area smaller and smaller. For this reason, in addition to abandonment of agriculture on all slopes steeper than 15 degrees and their reversion to forests or grasslands, general methods must be adapted to specific situations on other land in carrying out capital construction, soil conservation, fertility conservation, and water conservation for a thorough transformation of conditions of agricultural production. In capital construction of the land, it is necessary to adhere to a combination of biological and engineering measures, lands suitable for forests used for forests, land suitable for animal husbandry being used for animal husbandry, and lands suitable for farming being used for farming for all-around control of mountains, slopes, ravines, and shore areas. Hillsides and ridges must be built up and low spots filled in to build terraces the insides of which have pulverized soil and the outsides of which are built firmly, the soil tamped, and walls layed up to form high outsides and low insides. In building terraced fields, immature soil should be used for fill with mature soil spread on top, and a mixture of sandy and clayey soil used. Much harrowing, and much fertilization is necessary in order to turn immature soil into mature soil rapidly. Filled in ravines with level surfaces and river shore lands capable of being irrigated and drained may be built by sinking a thicket of piles, building dams, constructing drainage ditches and water cascades for a combination of filling in, silting up, and abrading of ravines or river shore lands. Since 1973, Xing County has stuck to a program of building wetlands first, then dams, and finally terraced fields, each person building an average 2 mu. As a result the county's per capita grain

fields have shot up from 200-odd jin to nearly 1,000 jin per mu.

2. Building of a Rational Farming System

A rational farming system conforms to the local natural environment and production conditions, the characteristics of crop biology, and the needs of the country, the collective, and commune members. These determine what crops will be grown in a place, how much will be grown, and how they will be grown for all-around sustained increases in yields. Crop drought resistance must be considered first. Crops such as millet, broom corn millet, sweet potatoes, gaoliang, wheat, broad beans, peas, naked oats, sunflowers, sesame, potatoes, yellow mustard, sweet clover, and Shadawang [3097 2092 2489] as well as pasture grasses are drought resistant by nature. They should be grown in an adaptation of general methods to specific locations. In 1980, Yangqu County had a severe drought, yet the county's 106,000 mu of sunflowers produced 121 jin per mu of sunflower seeds. This production alone provided per capita earnings of 67 yuan, which was 58.7 percent of total earnings from agriculture. Second is a combination of use and nurture of the soil. Arid regions of Gansu Province (places having an annual rainfall of less than 250 millimeters) practiced a farming system whereby each year one-third of the land was allowed to lie fallow, one-third was planted to summer crops, and one-third was planted to fall crops. This permitted them to use in 2 years the precipitation obtained in 3 years, and to use summer rainfall during the following spring. In semi-arid regions (places having between 250 and 750 millimeters of rainfall annually), a farming system was used whereby one-third of the area was annually planted to broad beans, one-third to summer crops, and one-third to fall crops. Broad beans and peas tolerate drought to produce consistent yields. They are able to fix nitrogen, and they bear early. By using a combination of deep summer plowing to collect rainfall and raking to conserve moisture, a good foundation can be prepared for the growing of wheat. In the following year, after the wheat has been harvested, the land is again plowed and harrowed in summer so that water can be stored and moisture conserved for autumn crops during the third year. Hanyuan Prefecture used a farming system that produced five crops of peas, wheat, and spring crops every 4 years. In northwestern Shanxi, Youyu County planted sweet clover, naked oats, and sesame in three crops every 4 years, or sweet clover, potatoes, naked barley, and sesame in four crops every 5 years. Wuzhai County used a systems of three crops each 3 years for the growing of vetch [*Vicia sativa*], naked oats, and sesame, all of which were rather good measures for combining use and nurture of the soil. Third is consideration of economic effectiveness. In planning crops, it is necessary to take into consideration the planting of a certain proportion of

crops that do very well locally. Examples include the growing of sesame in northwestern Shanxi, of cotton in southern Shanxi, of sunflowers in Yangqu County, or of membranous milk vetch [*Astragalus membranaceus*] in Hunyuan County. During the past several years about one-fifth of the total cultivated area of Shencheng County has grown sesame and throughout the county yields from oil-bearing crops and grain, as well as income have all risen. In 1980, the county sold the state 4.01 million jin of marketable oil, or an average of 19 jin of edible oil per capita, and an average 500 jin per capita of grain rations, while income averaged 133 yuan per capita. Average per capita amount of grain rations increased 82.5 percent over 1978, and average per capita earnings more than doubled. Fourth is other techniques for combating drought and natural disasters. Drought may be avoided by sowing seeds in stages. Fanzhi County as well as some others grew some naked oats in summer and some in fall, and planted the fall naked oats at three different times so that if no harvest resulted from one sowing, another sowing might produce a harvest. In order to adjust to the early or late arrival of rainfall, early, intermediate, and late maturing varieties of millet, broomcorn millet, and beans should be kept in readiness. In sowing, two of the aforementioned crops should be interspersed. In northwestern Shanxi, for example, yellow mustard was frequently intersown with millet, and mung beans were often intersown with millet and broomcorn millet. Kidney beans were intersown with red beans, cowpeas, and buckwheat. Soybeans were intersown with turnips, corn, and gaoliang.

3. Building of a Farming System That Collects Water and Conserves Soil Moisture

Most of the province's soil is loess mother material. It is loose and thick, making it ideal for the storage of water. Studies have shown that a 2 meter thick layer of soil can store 400 millimeters of water, about 200 millimeters of which is usable. After harvesting its wheat, Dongguanzhuan Production Brigade promptly removed the stubble, plowed deeply before the arrival of the dog days of summer, cultivated the soil during the dog days and then promptly raked it to conserve soil moisture. Before the wheat was sown, 408.8 millimeters of water were stored in the soil layer to a depth of 20 centimeters. Summer rains were used in fall and spring. Jinzhuang Production Brigade used "three soil moistures" in preparing the soil, which is to say that deep plowing to store soil moisture was done in the fall, harrowing to conserve soil moisture was done in spring, and after sowing the ground was compacted to increase soil moisture. The soil's water content just before sowing was between 3 and 4 percent higher than spring-plowed soil. Autumn rains were used in spring to assure full stands of seedlings. In Fanzhi County,

the Hejiawa Production Brigade used a system of "two turnings of the soil," and "harrowing immediately following plowing" for the harvesting of fairly early peas, broad beans, naked oats, and wheat. The ground was rolled during the coldest days of winter," so that even without rain in the following spring consistently full stands of seedlings were possible. The Provincial Water Conservancy Institute used the "dryland agriculture water storage and fertilizer gathering farming method." Between 1 July and 17 September, rainy, overcast weather endured for 41 days, and 430.7 millimeters of rain fell, all of it being impounded or seeping into the soil. Experiments done with spray irrigation simulation have shown that terracing field ravines to combat drought for a bumper harvest can impound or soak up a rainfall of 213 millimeters over a period of 70 minutes. When corn seedlings were between 0.5 and 1 chi high in Dazhai Production Brigade in Xiyang County, a pick was used to make a furrow 6 to 8 cun deep between rows. This could store 6.7 percent more water than a shallow 2 cun deep furrow made with a hoe. In Lanzhou, Gaolan, and Haiyuan prefectures in Gansu Province rainfall averages between 180 and 300 millimeters annually; most of it falls during torrential rainstorms; and evaporation is between six and 10 times as great as rainfall. Here the masses have fashioned gravel fields containing gravel to a depth of 10 to 20 centimeters that soaks up water fast and permits little evaporation. The water content of such soil is about double that of fields containing earth; in spring, soil temperatures are 1 to 2 degrees centigrade higher; in summer soil temperature is 3 to 4 degrees higher; the soil thaws about 10 days earlier and freezes between 20 and 30 days later than ordinary soil; the growing season is prolonged by a month; ripening time is advanced by 10 to 20 days; yields are doubled or tripled; and quality is good as well.

4. Building of a Scientific System of Fertilization

Yet another major factor affecting the increase of agricultural yields in the province's drylands is inadequate soil fertility. Only one-fourth of the province's soil has an organic content greater than 1 percent; two-fifths has an organic content between 0.5 and 1 percent; and one-third has an organic content between 0.1 and 0.5 percent. Causes for insufficient organic matter in the soil are as follows: 1) Failure to maintain the soil, and soil erosion. 2) No fertilization for many years (The Provincial Department of Agriculture estimates that at least 9 million mu of land is annually planted without fertilization). 3) The land is taken out of cultivation or is rotated in and out of cultivation. A Provincial Forestry Department survey shows at least 10 million mu of land as either being taken out of cultivation or rotated in and out of cultivation, growth of natural vegetation being relied on to restore fertility. In 1978, grain yields in Pinglu,

Zuoyun, Pianguan, Kefeng, Youyu, Shenchì, and Wuzhai counties, and in the Xinrong District of Datong City amounted to less than 100 jin per mu, with each 8 to 10 millimeters of rainfall producing only 1 jin of grain. In 1978, 28 percent of the province's counties had production expenses amounting to more than 40 percent of earnings including Pinglu, Youyu, Shenchì, Xinrong, Pianguan, Kefeng, Zuoyun, and Shuoxian where the amount of cultivated land averages between 5 and 11 mu per capita, grain yields are only 156 jin per mu, and average per capita income is between 20.30 and 57.10 yuan, less than the investment in production.

How can the situation of soil infertility and low yields be changed? The experiences of various places has been as follows: 1) A rational pattern of farming, forestry, animal husbandry, sideline occupations, and fisheries to make fullest use of natural resources, and as a means of expanding the transformation of energy and the material cycle. 2) Each person building between 2 and 3 mu of basic farm lands and conserving their water, soil, and fertilizer. 3) Use of organic matter from cultivated land and uncultivated land, with the return to the fields of dung from the raising of livestock and poultry plus stalks and stems, and the use of city wastes in the countryside. The problem now is that annually more than half (13 billion jin) of crop stalks and stems are burned for fuel. 4) Revival and increase in the growing of pulses, green manure crops, and the area sown to pasture grasses. Measurements show that 1 mu of soybeans or peas can fix between 6 and 20 jin of nitrogen annually; 1 mu of alfalfa can fix between 20 and 30 jin of nitrogen, and 1 mu of sweet clover can fix between 12 and 13 jin of nitrogen annually to increase the soil's organic content. 5) Rational use of chemical fertilizers with the proper matching of amounts of nitrogen, phosphate, and potash in the substitution of the inorganic for the organic. Experiments conducted at 38 infertile dryland sites in Wenxi County by the Shanxi Agricultural University showed that fertilization with 30 jin per mu of ammonium nitrate, and 70 jin per mu of calcium superphosphate increased yields by an average 54 percent.

5. Several Drought-resistant Sowing Methods

In the course of long struggle against drought, the people of Shanxi Province have accumulated abundant experience in ways of fighting drought in the sowing of seeds and protection of seedlings, which may be summarized in the following several points: 1) Rush planting of seeds to take advantage of soil moisture; 2) seeking out soil moisture to sow seeds; 3) adding to soil moisture to sow seeds; 4) borrowing soil moisture to sow seeds; 5) carrying of water to dibble seeds or plant seeds with a water drill; 6) planting when dry to await rain; 7) opening furrows to

await rain; 8)growing of seedlings for transplanting; 9) spreading of gravel to plant seeds; 10) use of ground mulch. These ways of sowing seeds to resist drought have to be used flexible to get a full stand of seedlings from a single sowing.

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BRIEFS

SUMMER HARVEST--Kunming, 9 Jun (XINHUA)--Preliminary estimates show a 12 percent increase this year in Yunnan Province's summer harvest, which has reached 2.5 billion jin. By 5 June more than 330 million jin had already been delivered to the state and put in storage. Yunnan has witnessed grain output increases for 3 years in a row. The total acreage of summer grain planted last autumn was 430,000 mu more than in 1981. [Summary] [OW242154 Beijing XINHUA Domestic Service in Chinese 1234 GMT 9 Jun 83]

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Water Supply

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TITLE: "Problems of Urban Water Supply in Beijing, Tianjin, and Cities of Hebei Province"

SOURCE: Dalian ZIRAN ZIYUAN [NATURAL RESOURCES] in Chinese No 1, Mar 83 pp 34-42

ABSTRACT: Beijing, Tianjin, and Hebei are among the regions of serious water shortages in recent years. **Drought, concentration of industries and population,** and waste all contribute to the problem. The paper suggests: (1) Related departments should consider allocation of capital for such water conservation measures as recycling water in industries; (2) Implement a water supply plan by charging higher prices for greater quantities; (3) Raise the price of water for industrial use to reflect cost of maintenance and repair of facilities; (4) Reform production processes for continuous reduction of unit water consumption of products; (5) Use a unified method to calculate the quantity of water saved or used; (6) Establish a unified water management agency; (7) Emphasize the work of protecting sources of urban water supply to prevent pollution; (8) Overall study and planning of upper, middle, and lower reaches of stream valleys to achieve reasonable regulation and distribution of all sources of water.

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